Nikon

En

The Nikon Guide to Digital Photography with the COOLPIX 4100 3200 2200 DIGITAL CAMERA



Trademark Information

For Your Safety

To prevent damage to your Nikon product or injury to yourself or to others, read the following safety precautions in their entirety before using this equipment. Keep these safety instructions where all those who use the product will read them.

The consequences that could result from failure to observe the precautions listed in this section are indicated by the following symbol:

⚠ This icon marks warnings, information that should be read before using your Nikon product to prevent possible injury.

WARNINGS

⚠ Turn off immediately in the event of malfunction

Should you notice smoke or an unusual smell coming from the equipment or from the AC adapter (available separately), unplug the AC adapter and remove the batteries immediately, taking care to avoid burns. Continued operation could result in injury. After removing the batteries, take the equipment to a Nikon-authorized service center for inspection.

⚠ Do not use in the presence of flammable gas

Do not use electronic equipment in the presence of flammable gas, as this could result in explosion or fire.

⚠ Observe caution when using the camera strap

Never place the strap around the neck of an infant or child.

⚠ Do not disassemble

Touching the product's internal parts could result in injury. In the event of malfunction, the product should be repaired only by a qualified technician. Should the product break open as the result of a fall or other accident, take the product to a Nikon-authorized service center for inspection after unplugging the AC adapter and removing the batteries.

⚠ Observe proper precautions when handling batteries

Batteries may leak or explode if improperly handled. Observe the following precautions when handling batteries for use in this product:

- Before replacing the batteries, turn the camera off and make sure the power-on lamp has gone out. If you are using an AC adapter, be sure it is unplugged.
- Use a pair of rechargeable Nikon EN-MH1 NiMH batteries, one CR-V3 lithium battery, two ZR6 (AA) nickel manganese batteries, LR6 (AA) alkaline batteries, or two FR6/L91 (AA) lithium batteries. Do not use other types of battery. Do not mix batteries of different types.
- When inserting batteries, do not attempt to insert them upside down or backwards.
- Do not short or disassemble batteries.

- Do not expose batteries to flame or to excessive heat.
- Do not immerse in or expose to water.
- Do not transport or store with metal objects such as necklaces or hairpins.
- Batteries are prone to leakage when fully discharged. To avoid damage to the product, be sure to remove the batteries when no charge remains.
- When the battery is not in use, at tach the terminal cover and store in a cool place.
- Immediately after use, or when the product is used on battery power for an extended period, the batteries may become hot. Before removing the batteries, turn the camera off and allow the batteries to cool.
- Discontinue use immediately should you notice any changes in the batteries, such as discoloration or deformation.

⚠ Use appropriate cables

When connecting cables to the input and output jacks, use only the cables provided or sold by Nikon for the purpose, to maintain compliance with product regulations.

⚠ Keep out of reach of children

Particular care should be taken to prevent infants from putting the batteries or other small parts into their mouths.

⚠ Removing memory cards

Memory cards may become hot during use. Observe due caution when removing memory cards from the camera.

⚠ CD-ROMs

The CD-ROMs on which the software and manuals are distributed should not be played back on audio CD equipment. Playing CD-ROMs on an audio CD player could cause hearing loss or damage the equipment.

⚠ Observe caution when operating the flash

Using the flash close to your subject's eyes could cause temporary visual impairment. Particular care should be observed if photographing infants, when the flash should be no less than one meter (39″) from the subject.

⚠ Avoid contact with liquid crystal

Should the monitor break, care should be taken to avoid injury due to broken glass and to prevent liquid crystal from the monitor touching the skin or entering the eyes or mouth.

Cautions

To ensure continued enjoyment of your Nikon product, observe the following precautions when storing or using the device:

Keep dry

The device will be damaged if immersed in water or subjected to high levels of moisture.

Handle the lens and all moving parts with care

Do not apply force to the lens or lens cover, or to the connector, card slot, or battery chamber covers. These parts are especially susceptible to damage.

Turn the product off before removing or disconnecting the power source

Do not unplug the product or remove the batteries while the product is on, or while images are being recorded or deleted. Forcibly cutting power in these circumstances could result in loss of data or in damage to product memory or internal circuitry. To prevent an accidental interruption of power, avoid carrying the product from one place to another while the AC adapter (available separately) is connected.

Do not drop

The product may malfunction if subjected to strong shocks or vibration.

Keep away from strong magnetic fields

Do not use or store this device in the vicinity of equipment that generates strong electromagnetic radiation or magnetic fields. Strong static charges or the magnetic fields produced by equipment such as radio transmitters could interfere with the monitor, damage data stored on the memory card, or affect the product's internal circuitry.

Avoid sudden changes in temperature

Sudden changes in temperature, such as occur when entering or leaving a heated building on a cold day, can cause condensation inside the device. To prevent condensation, place the device in a carrying case or a plastic bag before exposing it to sudden changes in temperature.

Do not point the lens at strong light sources for extended periods

Avoid pointing the lens at the sun or other strong light sources for extended periods when using or storing the camera. Intense light may cause deterioration in the CCD image sensor, producing a white blur effect in photographs.

Notices

- No part of the manuals included with this product may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without Nikon's prior written permission.
- Nikon reserves the right to change the specifications of the hardware and software described in these manuals at any time and without prior notice.
- Nikon will not be held liable for any damages resulting from the use of this product.
- While every effort has been made to ensure that the information in these manuals is accurate and complete, we would appreciate it were you to bring any errors or omissions to the attention of the Nikon representative in your area (address provided separately).

Notice for customers in the U.S.A.

Federal Communications Commission (FCC) Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Nikon E4100/E3200/E2200
Tested To Comply
With FCC Standards
FOR HOME OR OFFICE USE

- Consult the dealer or an experienced radio/television technician for help.

CAUTIONS

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Nikon Corporation may void the user's authority to operate the equipment.

Interface Cables

Use the interface cables sold or provided by Nikon for your equipment. Using other interface cables may exceed the limits of Class B Part 15 of the FCC rules.

Notice for customers in the State of California

WARNING: Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. ***Wash hands after handling.***

Nikon Inc.,
1300 Walt Whitman Road, Melville, New York
11747-3064, U.S.A.
Tel.: 631-547-4200

Notice for customers in Canada

CAUTION

This class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

ATTENTION

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Notice Concerning Prohibition of Copying or Reproduction

Note that simply being in possession of material that has been digitally copied or reproduced by means of a scanner, digital camera or other device may be punishable by law.

- **Items prohibited by law from being copied or reproduced**

  Do not copy or reproduce paper money, coins, securities, government bonds, or local government bonds, even if such copies or reproductions are stamped "Sample."

  The copying or reproduction of paper money, coins, or securities which are circulated in a foreign country is prohibited.

  Unless the prior permission of the government has been obtained, the copying or reproduction of unused postage stamps or post cards issued by the government is prohibited.

  The copying or reproduction of stamps issued by the government and of certified documents stipulated by law is prohibited.

- **Cautions on certain copies and reproductions**

  The government has issued cautions on copies or reproductions of securities issued by private companies (shares, bills, checks, gift certificates, etc.), commuter passes, or coupon tickets, except when a minimum of necessary copies are to be provided for business use by a company.
  Also, do not copy or reproduce passports issued by the government, licenses issued by public agencies and private groups, ID cards, and tickets, such as passes and meal coupons.

- **Comply with copyright notices**

  The copying or reproduction of copyrighted creative works such as books, music, paintings, woodcut prints, maps, drawings, movies, and photographs is governed by national and international copyright laws. Do not use this product for the purpose of making illegal copies or to infringe copyright laws.

Before Taking Important Pictures

Before taking pictures on important occasions (such as at weddings or before taking the camera with you on a trip), take a test shot to ensure that the camera is functioning normally. Nikon will not be held liable for damages or lost profits that may result from product malfunction.

Use Only Nikon Brand Electronic Accessories

Your Nikon COOLPIX camera is designed to the highest standards and includes complex electronic circuitry. Only Nikon brand electronic accessories (including battery chargers, batteries, and AC adapters) certified by Nikon specifically for use with your Nikon digital camera are engineered and proven to operate within the operational and safety requirements of this electronic circuitry.

The use of non-Nikon electronic accessories could damage your camera and may void your Nikon warranty.

For more information about Nikon brand accessories, contact your local authorized Nikon dealer.

The AF-Assist Illuminator LED

The light-emitting diode (LED) used in the AF-assist illuminator conforms to the following IEC standard:

CLASS 1 LED PRODUCT
IEC60825-1 Edition 1.2^{-2001}

Design Rule for Camera File System (DCF)

Your camera conforms to the Design Rule for Camera File System (DCF), a standard widely used in the digital camera industry to ensure compatibility among different makes of camera.

Exif Version 2.2

Your camera supports Exif (Exchangeable Image File Format for Digital Still Cameras) version 2.2, a standard that allows information stored with pictures to be used for optimal color reproduction when images are output on Exif-compliant printers.

Table of contents

Introduction

Thank you for your purchase of a Nikon COOLPIX4100 (E4100)/COOLPIX3200 (E3200)/COOLPIX2200 (E2200) digital camera. This manual has been written to help you enjoy taking pictures with your Nikon digital camera. Read this manual thoroughly before use, and keep it handy when using the product.

To make it easier to find the information you need, the following symbols and conventions are used:

This icon marks cautions, information you should read before use to prevent damage to your camera.

This icon marks tips, additional information you may find helpful when using your camera.

This icon marks notes, information that you should read before using your camera.

This icon indicates that more information is available elsewhere in this manual or in the *Quick Start Guide*.

Internal Memory and SD Memory Card

This camera uses both an internal memory and an SD memory card for storing pictures. If you insert a card into the camera, pictures will automatically be stored on the card instead of in the memory. To store, view or delete pictures in the memory or to format the memory, remove the memory card first.

Life-Long Learning

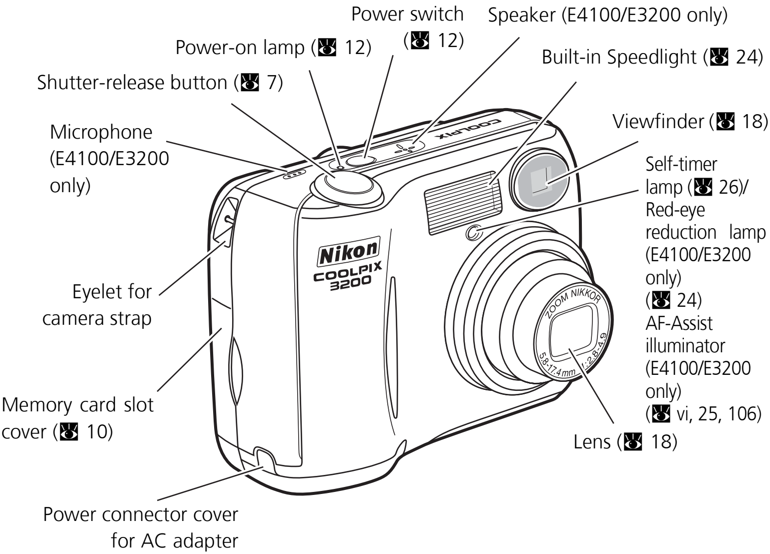
As part of Nikon's "Life-Long Learning" commitment to ongoing product support and education, continually-updated information is available on-line at the following sites:

- For users in the U.S.A.: *http://www.nikonusa.com/*
- For users in Europe: *http://www.europe-nikon.com/support*
- For users in Asia, Oceania, the Middle East, and Africa: *http://www.nikon-asia.com/*

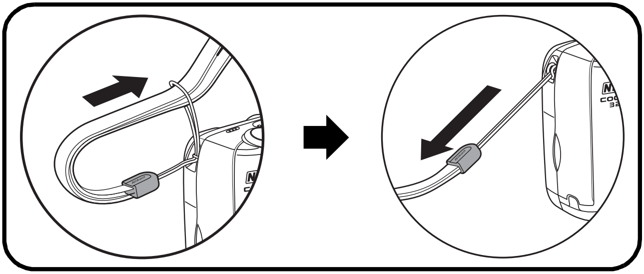
Visit these sites to keep up-to-date with the latest product information, tips, answers to frequently-asked questions (FAQs), and general advice on digital imaging and photography. Additional information may be available from the Nikon representative in your area. See the URL below for contact information:

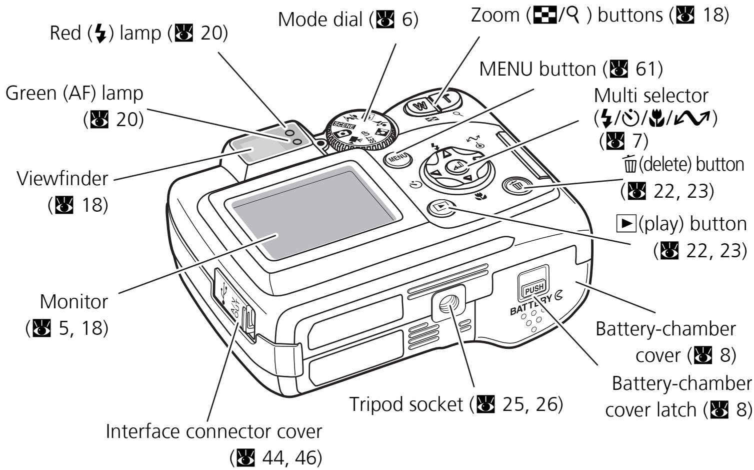
http://nikonimaging.com/

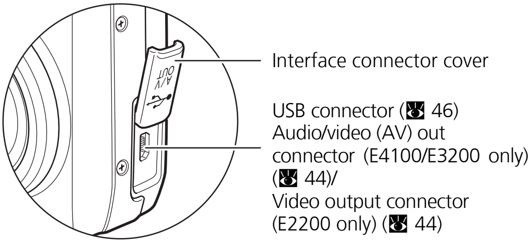
Parts of the Camera



Attaching the Camera Strap

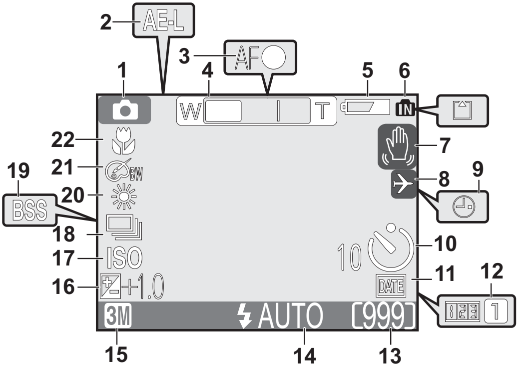



Red (⚡) lamp (✎ 20)
Mode dial (✎ 6)
Zoom (W/T) buttons (✎ 18)
MENU button (✎ 61)
Green (AF) lamp (✎ 20)
Multi selector (⚡/⏲/🌷/↗) (✎ 7)
Viewfinder (✎ 18)
🗑(delete) button (✎ 22, 23)
▶(play) button (✎ 22, 23)
Monitor (✎ 5, 18)
Battery-chamber cover (✎ 8)
Battery-chamber cover latch (✎ 8)
Tripod socket (✎ 25, 26)
Interface connector cover (✎ 44, 46)
MENU
SCENE
PUSH
BATTERY
A/V OUT


Interface connector cover
USB connector (✎ 46)
Audio/video (AV) out connector (E4100/E3200 only) (✎ 44)/
Video output connector (E2200 only) (✎ 44)
A/V OUT

The Monitor

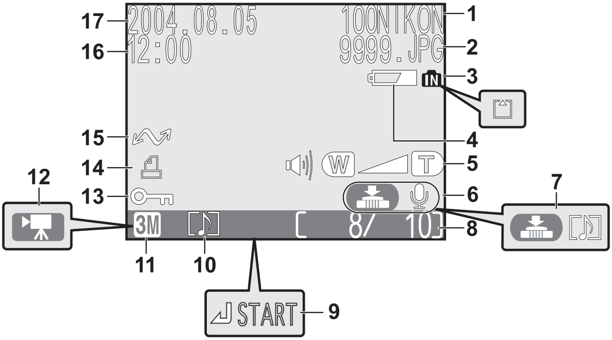
Shooting



1	Shooting mode	16
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1 Appears when taking pictures with Panorama Assist
2 Displayed when zoom buttons are pressed.
3 Appears when batteries are running low.
4 Appears at slow shutter speeds to warn that pictures may be blurred.
5 Appears when camera clock has not been set.
6 Indicates that camera has raised sensitivity automatically.

Playback

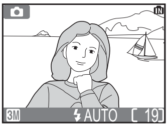


1	Current folder	23
2	File number and type	23
3	Internal memory/memory card indicator	16
4	Battery level indicator[1]	12
5	Volume indicator[2]	60
6	Voice memo recording guide[2]	43
7	Voice memo playback guide[2]	43
8	Current frame number/total number of frames/length of movie	23, 60
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10	Voice memo icon[2]	43
11	Image mode	63
12	Movie indicator	57
13	Protect icon	75
14	Print-order icon	48
15	Transfer icon	76
16	Time of recording	14-15
17	Date of recording	14-15

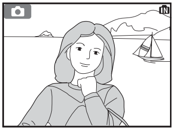
1 Appears when batteries are running low.
2 E4100/E3200 only.

Controlling the Monitor

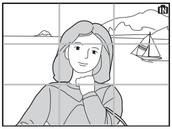
To hide or display indicators in the monitor, select the **Monitor settings** option in the setup menu. (☞ 86)



Monitor shows current settings and view through lens



Monitor shows view through lens only



Monitor shows framing grid

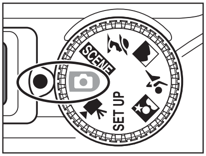


Monitor off

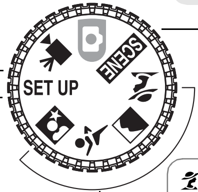
Monitor turns off while flash is charging (☞ 20).

The Mode Dial

Using the mode dial, you can select from seven shooting modes and setup mode. Choose a shooting mode according to shooting conditions.



To select a mode, align the mode icon with the "◉" mark next to the mode dial.



Auto (16)

Choose this mode to take pictures. Select from six shooting menus to achieve the desired effect.

Movie (56-59)

Choose from three kinds of movies. Make movies with sound using the E4100/E3200, or using E2200 for silent movies only.

SCENE Scene (28, 34)

Choose from eleven "scenes" suited to different subjects or shooting conditions and let the camera do the rest.

SET UP Setup (82)

Choose this mode to display the set-up menu, where you can perform such tasks as setting the camera clock and adjusting monitor brightness.

Portrait Assist

Landscape Assist

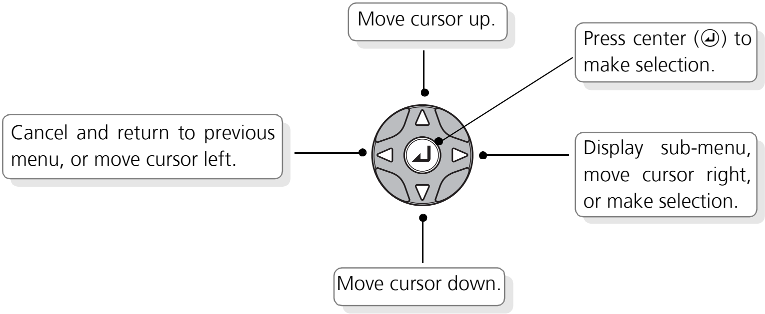
Sports Assist

Night Portrait Assist

Use framing assist to help compose pictures suited to a particular type of subject (28-33).

Navigating the Menus

The multi selector is used to navigate through the camera menus.



The Shutter-Release Button

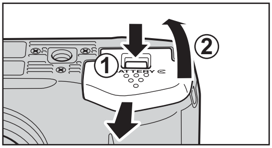
Your camera has a two stage shutter-release button. The camera sets focus and exposure when the button is pressed halfway. The green (AF) lamp next to the viewfinder will light when the focus operation is complete. Focus and exposure will remain locked while the shutter-release button is pressed halfway. To take the picture, press the shutter-release button the rest of the way down.



Inserting Batteries

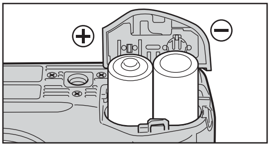
Your camera uses:

- LR6 (AA) alkaline batteries (×2), or
- Nikon EN-MH1 rechargeable nickel-metal hydride (NiMH) batteries (×2), or
- ZR6 (AA) nickel manganese batteries (×2), or
- FR6/L91 (AA) lithium batteries (×2), or
- CR-V3 lithium batteries (×1)



1 Open the battery-chamber cover

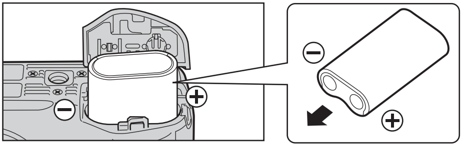
- Pressing the battery-chamber latch (PUSH; ①), slide the battery-chamber cover out (②).



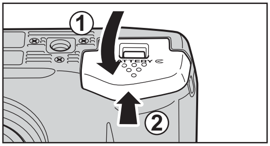
AA batteries

2 Insert the batteries

- Insert the batteries as shown in the label inside the battery chamber.



CR-V3



3 Close the battery-chamber cover

- Close the battery-chamber cover (①) and slide it in until it latches (②). Be sure that the battery-chamber cover is properly latched.

[IMPORTANT] Battery Type

To improve battery performance, select the type of battery currently inserted in the camera in the setup menu. The default setting is the type of the included batteries (E4100) or **Alkaline** (E3200/ E2200). When any other type of battery is used, turn the camera on and change the setting (96).

Replacing Batteries

Turn the camera off and make sure that the power-on lamp has gone out before removing or inserting batteries.

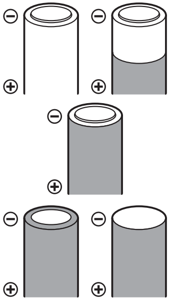
Read Battery Warnings

Read and follow all warnings and instructions supplied by the battery manufacturer.

Damaged Batteries

The following batteries can not be used:

- Batteries with peeling or damaged insulation. Using batteries with damaged insulation could result in leakage, overheating, or rupture. Note that due to manufacturing defects even new batteries may have faulty insulation.
- Batteries with insulation that covers only the sides of the battery and not the area around the negative terminal.
- Batteries with a flat negative terminal. Do not use such batteries even if the insulation adequately covers the area around the negative terminal.



Alkaline Batteries

Performance of alkaline batteries may vary greatly depending on the manufacturer. Choose a reliable brand.

EN-MH1 Batteries

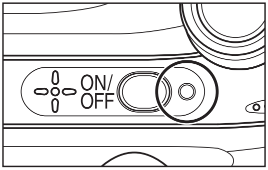
Using an MH-71 battery charger, charge EN-MH1 batteries before first use. Charge each pair of batteries at the same time — do not charge batteries one at a time or mix batteries with different charges. Note that EN-MH1 batteries may discharge quickly immediately after purchase or after the batteries have been left unused for an extended period. This is normal, and the batteries will retain a charge for longer periods after being used and recharged several times. For more information on charging batteries, see the documentation provided with the MH-71.

Alternative Power Sources

- To power the camera continuously for extended periods, use an EH-62B AC adapter (☞ 97). ***Do not, under any circumstances, use another make or model of AC adapter.*** Failure to observe this precaution could result in overheating or in damage to the camera.
- We recommend that you buy CR-V3 lithium batteries as a back-up power source.

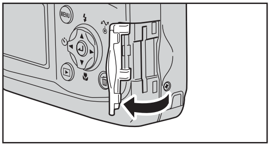
Inserting Memory Cards

Pictures can be stored in the camera's internal memory (about 14.5MB) or on Secure Digital (SD) memory card. If no memory card has been inserted in the camera, pictures will be stored in the memory, and if the camera contains a memory card, then pictures will automatically be stored on the card.
To store pictures in the internal memory, remove the memory card.

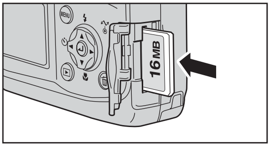


1 Confirm that the camera is off

- The power-on lamp should be off.

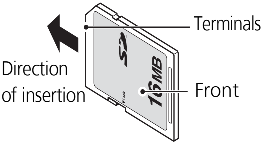


2 Open the memory card slot cover



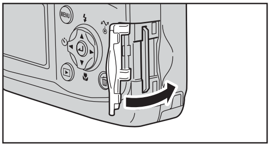
3 Insert the memory card

- Insert the memory card in the direction of the arrow as shown. Insert straight without bending.



Inserting Memory Cards

Insert the memory card terminals first.
Inserting the card upside down or backwards could damage the camera or the card. Check to be sure the card is in the correct orientation.



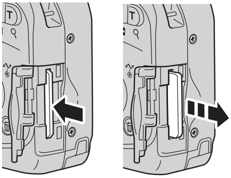
4 Close the memory card slot cover

Formatting Memory Cards

Memory cards must be formatted before first use. For information on formatting memory cards, see "The Setup Menu: Format memory/card" (93).

Removing Memory Cards

Memory cards can be removed without loss of data when the camera is off. To remove memory cards, turn the camera off and confirm that the power-on lamp is off. ***Do not open the memory card slot cover while the power-on lamp is lit.*** Open the memory card slot cover and press the memory card to partially eject the card. The card can then be removed by hand.

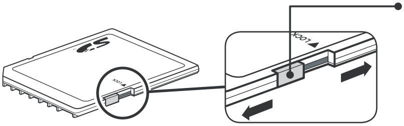


Memory Cards

- Use only Secure Digital (SD) memory cards.
- Do not disassemble or modify.
- Do not drop, bend, or expose to water or strong physical shocks.
- Do not touch the metal terminals with your fingers or metal objects.
- Do not affix labels or stickers to the memory card.
- Do not leave in direct sunlight in a closed vehicle or in other areas exposed to high temperatures.
- Do not expose to high levels of humidity or to corrosive gas.

The Write Protect Switch

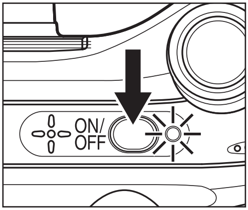
SD cards are equipped with a write protect switch to prevent accidental loss of data. When this switch is in the "lock" position, pictures can not be recorded, deleted, or edited, and the card can not be formatted. Do not lock the card when taking, deleting, or editing pictures.

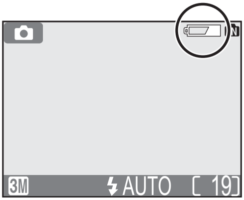


Write protect switch

When card is locked, pictures can be played back but can not be recorded, deleted, edited, or transferred using the camera button.

Checking the Battery Level





1 Turn the camera on

- Press the power switch. The power-on lamp will light. Rotate the mode dial to a setting other than SETUP.

2 Check the battery level in the monitor

- When the camera is turned on for the first time, a language selection dialog will be displayed. Choose the desired language and press center of multi selector. See "First Steps: Basic Setup" (☞ 14).
- Before checking the battery level, select the appropriate **Battery type** option in the setup menu (☞ 96).

Display	Meaning
NO ICON	Batteries fully charged.
(low battery icon)	Low battery.
WARNING!! BATTERY EXHAUSTED	Batteries exhausted. Replace with new or fully charged batteries.

The red (⚡) and green (AF) lamps will blink when the "BATTERY EXHAUSTED" warning is displayed.

The ▶ Button

The camera can also be turned on by pressing the ▶ button for about a second. Your most recent picture will be displayed in the monitor (☞ 22).

Turning the Camera Off

To turn the camera off, press the power switch when the power-on lamp is lit. Do not remove the batteries or disconnect the EH-62B AC adapter until the power-on lamp has gone out.

The Power-on Lamp

When the power on lamp is	The camera is
On	On
Blinking	In standby mode
Off	Off

Auto Power Off (Standby Mode)

If no operations are performed for one minute (default setting), the monitor will turn off automatically and the camera will enter standby mode to reduce the drain on the batteries. While the camera is in standby mode, the power-on lamp will blink. If no operations are performed for three minutes after the camera enters standby mode, the camera will turn off automatically and the power-on lamp will go out. The camera will be reactivated from standby mode when you:

- Press the power switch
- Press the shutter-release button halfway
- Press the ▶ button to view the last picture taken
- Press the **MENU** button to display the menu for the current mode
- Rotate the mode dial to select a new mode

The length of time before the camera enters standby mode can be changed using the **Auto off** option in the setup menu (92). However, when a menu or the setup menu is displayed, the monitor will turn off after three minutes, and when pictures are being shown in a non-stop slide show (72) or when the camera is powered by an AC adapter, the monitor will turn off after thirty minutes.

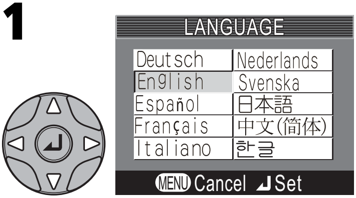
Sleep Mode

Turning sleep mode on will cause the camera to enter standby mode when there is no change in the brightness of the subject, even before the time selected in the AUTO OFF menu has elapsed (92).

Basic Setup

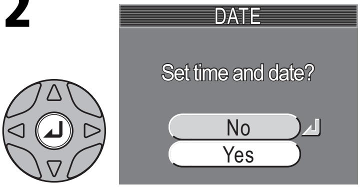
The first time the camera is turned on, a language-selection dialog will be displayed in the monitor. Follow the steps below to choose a language and set the time and date.

1



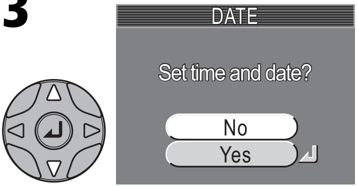
Highlight **Deutsch** (German), **English**, **Español** (Spanish), **Français** (French), **Italiano** (Italian), **Nederlands** (Dutch), **Svenska** (Swedish), **日本語** (Japanese), **中文(简体)** (Simplified Chinese), or **한글** (Korean) and press ↵.

2



Confirmation dialog displayed.

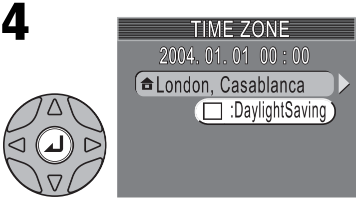
3



Highlight **Yes**.

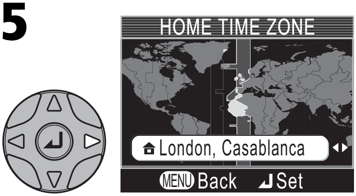
Select **No** to exit to mode currently selected with mode dial. If you exit without setting time and date, ◷ ("date not set") icon will flash in monitor when camera is in shooting mode and all pictures will have time stamp of "0000.00.00 00:00" (still images) or "2004.01.01 00:00" (movies).

4



TIME ZONE menu displayed. †

5



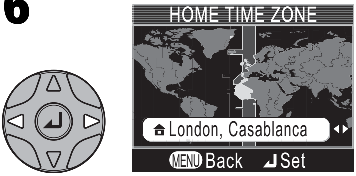
Display map of world time zones.

† To turn daylight saving time on or off, press multi selector down to highlight DaylightSaving and press center of multi selector. When DaylightSaving is checked, time will automatically be advanced one hour (85). To return to Step 4, press multi selector up to highlight current time zone.

The Clock Battery

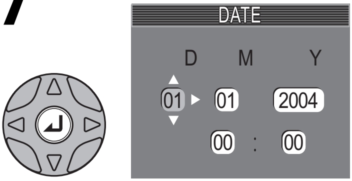
When the main batteries are installed or the camera is powered by an AC adapter, the clock battery will charge in about ten hours. When fully charged, the clock battery can provide several days of back-up power.

6



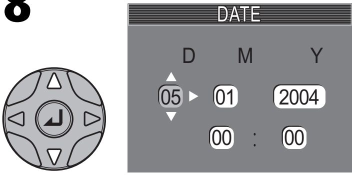
Select home time zone.

7



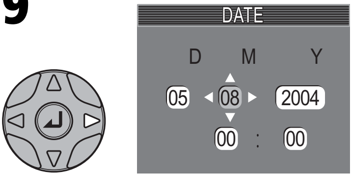
Display DATE menu.

8



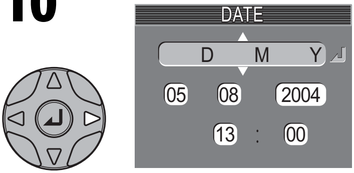
Edit **D**ay (order of **D**ay, **M**onth, and **Y**ear may differ in some areas).

9



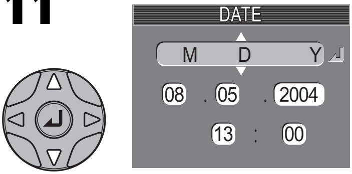
Select **M**onth. Repeat steps 8–9 to edit **M**onth, **Y**ear, hour, and minute.

10



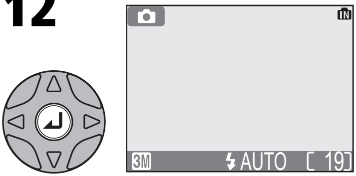
Highlight **D M Y**.

11



Choose order in which **D**ay, **M**onth, and **Y**ear will be displayed.

12



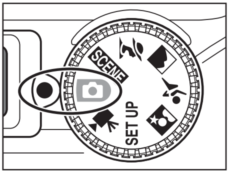
Exit to mode currently selected with mode dial. Note that time and date of recording will not be imprinted on pictures unless Date or Date and time is selected for Date imprint (87).

Setting the Clock from PictureProject (Windows XP/Mac OS X Only)

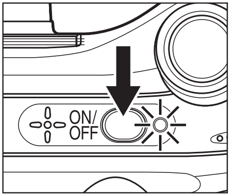
If the camera is connected with the **USB** option set to **PTP** (45), PictureProject (included) can be used to set the camera clock to the same time and date as the computer. See the PictureProject Reference Manual for details.

Step 1 - Select 📷 Mode

This section details the basic steps involved in taking pictures in 📷 (auto) mode. In this automatic, "point-and-shoot" mode, the majority of camera settings are controlled by the camera in response to shooting conditions, producing optimal results in most situations.



1 Rotate the mode dial to 📷



2 Turn the camera on

- The power-on lamp will light and the monitor will display a welcome screen (☞ 83). The camera is ready to shoot when the monitor shows the view through the camera lens.

Memory/memory card

When the camera contains a memory card, [card icon] is displayed, and when there is no card in the camera, IN is displayed.

Shooting mode/scene mode

📷 indicates auto mode.

Image mode

Choose from five (E4100/E3200) or four (E2200) options depending on how you plan to use the picture (☞ 63). The default setting is 4M (E4100), 3M (E3200) or 2M (E2200).



Flash mode

Choose from five modes depending on lighting and your creative intent (☞ 24). The default setting is ⚡AUTO (auto).

Number of exposures remaining

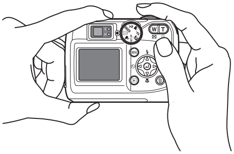
The number of pictures that can be stored depends on the capacity of the memory or memory card and the option chosen for **Image mode** (☞ 63).

Number of Exposures Remaining

If the number of exposures remaining is zero, the message "OUT OF MEMORY" will be displayed in the monitor. No further pictures can be taken until you:

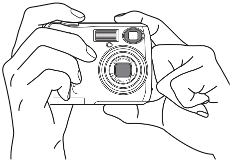
- choose a lower **Image mode** setting (☞ 63)
- insert a new memory card (☞ 10)
- delete some pictures (☞ 22-23, 73-74)

Step 2 - Frame the Picture

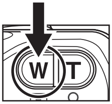


1 Ready the camera

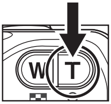
Hold the camera steadily in both hands. Photographs can be framed in the monitor or the viewfinder.



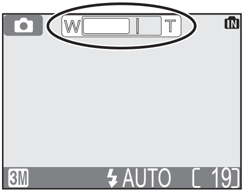
> **Don't Block the Shot**
>
> To avoid dark or partially obscured pictures, keep your fingers and other objects away from the lens, flash window and microphone (E4100/E3200 only).



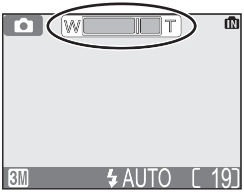
Zoom out



Zoom in



Indicator in monitor shows amount of zoom when either button is pressed



Digital zoom

2 Frame your subject

Your Nikon digital camera is equipped with two types of built-in zoom: optical zoom, in which the camera's telescoping lens can be used to magnify the subject up to 3 ×, and digital zoom, in which digital processing is used to further magnify the image up to 4 ×, for a total of 12 ×. Use the zoom buttons to frame your subject in the center of the monitor:

- Press the (**W**) button to zoom out from your subject, increasing the area visible in the frame.
- Press the (**T**) button to zoom in on your subject so that it fills a larger area of the frame.
- When the camera is zoomed in to maximum magnification, holding the (**T**) button down for about one second will trigger digital zoom. The zoom indicator will turn yellow, and the green (AF) lamp next to the viewfinder will blink. Use the (**T**) and (**W**) buttons to adjust zoom in the digital zoom range. To cancel digital zoom, press (**W**) until the zoom indicator turns white.

Digital Zoom

In digital zoom, data from the camera's image sensor are processed digitally, enlarging the center portion of the picture to fill the frame. Unlike optical zoom, digital zoom does not increase the amount of detail visible in the picture. Instead, details visible at maximum optical zoom are simply enlarged, producing a slightly "grainy" image. Note that the effects of digital zoom are not visible in the viewfinder - use the monitor when framing pictures with digital zoom. Digital zoom is not available when the monitor is off or when **Multi-Shot 16** is selected in the CONTINUOUS menu (68).

When Lighting Is Poor

When lighting is poor, sensitivity is raised to compensate and the image in the monitor may be slightly mottled. This is normal and does not indicate a malfunction.

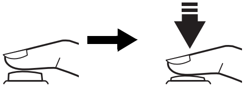
Monitor or Viewfinder?

Use the monitor to confirm camera settings at a glance while at the same time viewing an image that shows how the final picture will appear. This is particularly useful when the image in the viewfinder does not accurately reflect what will appear in the final picture, for example when:

- your subject is less than a meter (3´3”) from the camera
- digital zoom is in effect

Use the viewfinder when you want to save power by turning the monitor off (5), or when bright ambient lighting makes it difficult to see the display in the monitor.

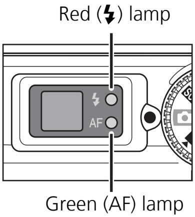
Step 3 - Focus and Shoot

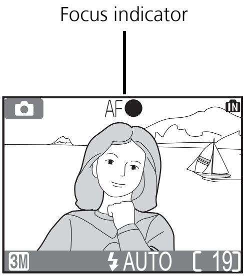


1 Focus

Press the shutter-release button halfway to set focus and exposure. In 📷 mode, the camera will automatically focus on the subject at the center of the frame. Focus and exposure will lock while the shutter-release button is pressed halfway.

With the shutter-release button pressed halfway, check focus and flash. Focus is indicated by the green AF (autofocus) lamp next to the viewfinder and by the focus indicator in the monitor. Flash status is indicated by the red ⚡ (flash-ready) lamp next to the viewfinder.

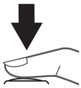




Red (⚡) lamp	On	Flash will fire when picture is taken.
	Blinks	Flash charging. Wait until lamp comes on.
	Off	Flash off or not required.
Green(AF)lamp/ focus indicator	On	Subject in focus.
	Flashes	Camera unable to focus on subject at center of frame. Using focus lock, focus on another subject at same distance, then recompose picture and shoot.

Monitor turns off while flash is charging.

2 Take the picture



Press the shutter release button the rest of the way down to take the picture. The shutter sound is played when the shutter-release button is pressed (default setting ☞ 90). To prevent blur, press the shutter-release button down smoothly. You can choose whether or not to display the camera shake warning (☞ 25).

During Recording

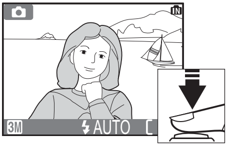
While pictures are being recorded to the memory or memory card, the green (AF) lamp blinks, and the ⌛ icon lights or the memory icon IN/▢ blinks. You can continue to take pictures until the ⌛ icon is displayed. ***Do not turn the camera off, eject the memory card, or remove or disconnect the power source while picture are being recorded.*** Cutting power or removing the memory card in these circumstances could result in loss of data or in damage to the camera or card.

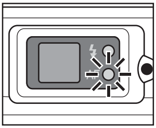
Getting Good Results with Autofocus

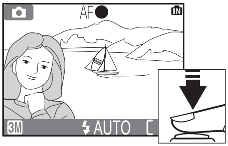
Autofocus performs best when there is contrast between the subject and the background and the subject is evenly lit. It does not perform well if the subject is very dark or moving rapidly, if there are objects of sharply differing brightness in the scene (e.g., the sun is behind your subject and their features are in deep shadow), or if there are several objects at different distances from the camera at the center of the frame (e.g., your subject is inside a cage).

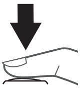
Focusing on Off-Center Subjects: Focus Lock

If your subject is not at the center of the frame when the shutter-release button is pressed halfway, your picture may be out of focus. To focus on an off-center subject:









❶ **Focus**

Position the subject in the center of the frame and press the shutter-release button halfway.

❷ **Check the green (AF) lamp and focus indicator**

With the shutter-release button pressed halfway, check that the green (AF) lamp and focus indicator glow steadily, indicating that the subject is in focus. Focus and exposure will remain locked while the shutter-release button is pressed halfway.

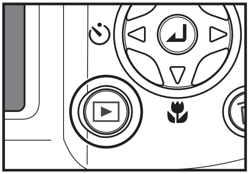
❸ **Recompose the picture**

Keeping the shutter-release button pressed halfway, recompose your picture. Do not change the distance between the camera and your subject while focus lock is in effect. If your subject moves, remove your finger from the shutter-release button and focus again at the new distance.

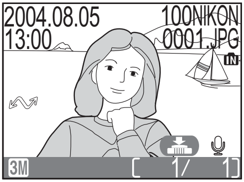
❹ **Take the picture**

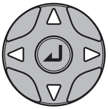
Press the shutter-release button the rest of the way down to shoot.

Step 4 - View the Results (Full-screen Playback Mode)



1 Press the ▶ button

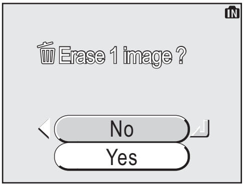




2 View pictures in the monitor

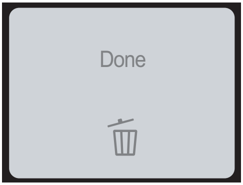
To view additional pictures, press the multi selector down or right to view pictures in the order recorded, up or left to view pictures in reverse order. To scroll quickly to a particular frame number without viewing the intervening pictures, press and hold the multi selector. (voice memo recording guide) is displayed (E4100/E3200 only).

To cancel full-screen playback and return to shooting mode, press the ▶ button again.



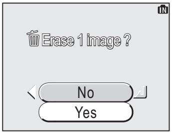
Deleting Unwanted Pictures

To delete the picture displayed in the monitor, press the 🗑 button. A confirmation dialog will be displayed. Press the multi selector up or down to highlight **Yes** and then press the center of the multi selector. To exit without deleting the picture, highlight **No** and press the center of the multi selector.



Deleting Your Last Shot

At any time during shooting, you can press the 🗑 button to delete the last picture taken. The confirmation dialog shown at right will be displayed. Delete the picture as described opposite under "Deleting Unwanted Pictures."



Playback Tip

The first and last pictures in memory are linked. Pressing the multi selector up or left when the first picture in memory is displayed will take you to the last picture. Pressing the multi selector down or right when the last picture is displayed takes you to the first picture.

Image File and Folder Names

In the memory or on the memory card, pictures are identified by file names with three parts: a four letter identifier, a four-digit file number assigned automatically by the camera in ascending order, and a three-letter extension (e.g., "DSCN0001.JPG")

Picture type		Identifier	Extension	
Original	Still picture	DSCN	.JPG	22
	Movie	DSCN	.MOV	60
Copy	Small copy	SSCN	.JPG	78
	Cropped copy	RSCN	.JPG	42
Voice memo appended to still picture (E4100/ E3200 only)	Voice memo	DSCN SSCN RSCN	.WAV	43

When a picture is viewed in the monitor, the file number and extension appear in the top right corner of the display. The identifier is not displayed, but is visible when the picture is transferred to a computer.

Pictures are stored in folders created automatically by the camera and named with a three-digit folder number followed by "NIKON" (e.g., "100NIKON"). Folders can hold up to 200 pictures; if you take a picture when the current folder contains 200 pictures, a new folder will be created by adding one to the current folder number. If you take a picture when the current folder contains a picture numbered 9999, a new folder will be created and file numbering will begin again from 0001. If the number of files reaches 200 or file numbering reaches 9999 when the memory or memory card contains a folder numbered 999, no further pictures can be taken until the memory or memory card has been formatted (93) or a new memory card inserted.

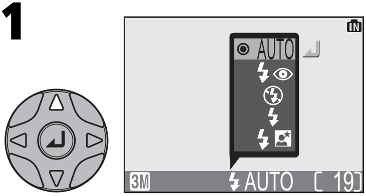
When Lighting Is Poor: Using the Flash

The following flash modes are available:

Mode	How it works	When to use it
AUTO **Auto**	Flash fires when lighting is poor.	Best choice in most situations.
Auto with red-eye reduction	Red-eye reduction lamp (E4100/E3200) or flash (E2200) fires before main flash, reducing "red-eye."	Use for portraits (works best when subject is well within range of flash and looking at pre-flash). Not recommended when quick shutter response is required.
Flash Cancel (off)	Flash will not fire even when lighting is poor.	Use to capture natural lighting under dim light or where use of flash is prohibited. If (camera shake) icon appears, care should be taken to avoid blurring.
Anytime Flash (fill flash)	Flash fires whenever picture is taken.	Use to "fill-in" (illuminate) shadows and back-lit subjects.
(Slow sync)	Auto flash combined with slow shutter speeds.	Use to capture both subject and background at night or under dim light. If (camera shake) icon appears, care should be taken to avoid blurring.

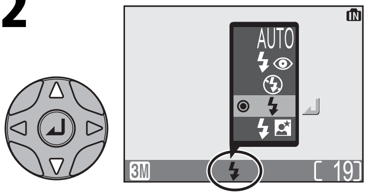
To select the flash mode:

1



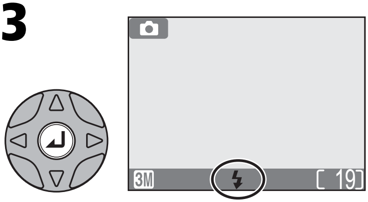
Display flash-mode menu.

2



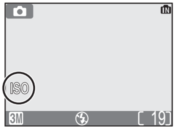
Highlight desired mode (to exit without changing mode, wait two seconds or press multi selector to left).

3



Exit menu. Flash mode shown by icon at bottom of monitor.

Sensitivity (ISO Equivalency)



"Sensitivity" is a measure of how quickly the camera responds to light. Your Nikon digital camera normally has a sensitivity roughly equivalent to film with an ISO 50 rating. When lighting is poor and the flash is off (⊛), the camera will automatically increase sensitivity, permitting faster exposures and minimizing blur caused by inadvertent camera movement (camera shake). An **ISO** icon will appear in the monitor to warn that the picture may be slightly mottled.

The ✋ (Camera Shake) Icon



When lighting is poor and the flash is off (⊛), shutter speeds will slow and pictures may be blurred. If the shutter speed required for exposure is very slow, a ✋ (camera shake) warning will appear in the monitor. Use of a tripod or support is recommended.

Flash Range

Refer to "Specifications" (☞ 107).

Close-Ups

The flash may not be able to light the entire subject at distances of less than 40 cm (1´4”). When taking close-ups, play each picture back after shooting to check the results.

Flash Mode Selection

In 📷 (auto) mode, the camera "remembers" the current flash mode setting even when the camera is turned off. The most recent setting will automatically be restored whenever the mode dial is set to 📷 unless the **Reset all** option in the setup menu is used to restore the default setting (☞ 94). Depending on the mode selected, the flash mode may change automatically when you choose a new shooting mode (☞ 28-39).

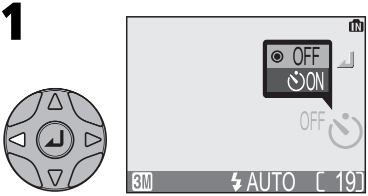
The AF-Assist Illuminator (E4100/E3200 only)

The E4100 and E3200 are equipped with an AF-assist illuminator. If lighting is poor, the built-in AF-assist illuminator will light when the shutter-release button is pressed halfway, allowing the camera to focus even when the subject is poorly lit. When the camera is zoomed all the way out, the AF-assist illuminator has a range of 0.4 – 2.0m (1’4” – 6’7”). The range at maximum zoom is 0.4 – 1.4m (1’4” – 4’6”). In scene mode (☞ 28-39), the AF-assist illuminator is only available in (Portrait), (Night Portrait) and (Party/Indoor) modes without the framing assist option (☞ 29-33), and in (Beach/Snow), (Sunset), (Copy), (Back light) and (Panorama assist) modes.

Taking a Self-Portrait: Using the Self-Timer

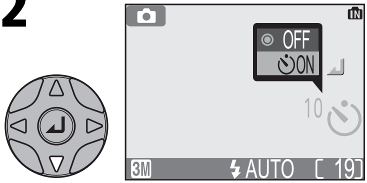
When the self-timer is on, pictures are taken ten seconds after the shutter-release button is pressed. This can be used to allow you to appear in your own pictures or to prevent close-up or low-light shots from being blurred by the camera movement that occurs when the shutter-release button is pressed.When using this option, you should either mount the camera on a tripod (recommended) or rest it on a flat, level surface.

1



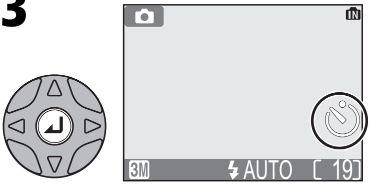
Display self-timer menu.

2



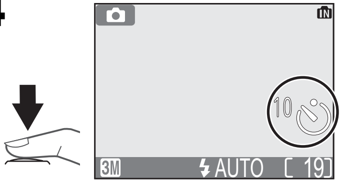
Highlight ⏲**ON** (to exit without changing mode, wait two seconds or press multi selector to left).

3



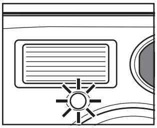
Exit menu. Self-timer icon is displayed in monitor.

4



Frame picture and start timer. Countdown timer shows number of seconds remaining until picture is taken.

Focus and exposure lock when the shutter-release button is pressed. The self-timer lamp on the front of the camera will blink until one second before the picture is taken, staying lit during the final second to warn that the shutter is about to be released.



Stopping the Self-Timer

To stop the timer before the picture is taken, press the shutter-release button.

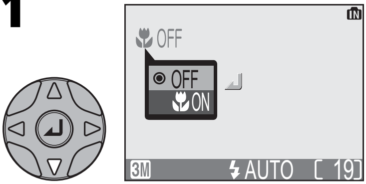
The Self-Timer

The self-timer is not available in some shooting modes (28-39).

Easy Close-ups: Macro Close-up Mode

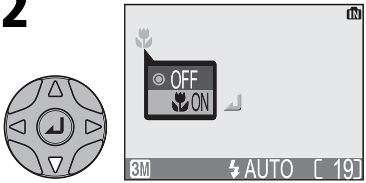
Macro close-up mode is used for taking close-up shots of small objects at very short distances (minimum 4 cm/1.6″).

1



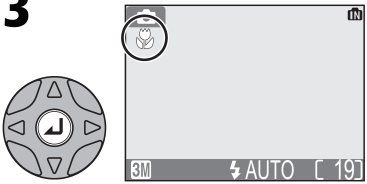
Display macro close-up menu.

2



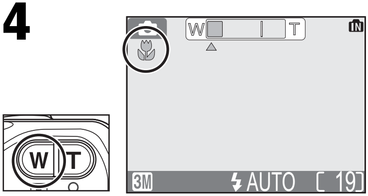
Highlight 🌷**ON** (to exit without changing setting, wait two seconds or press multi selector to left).

3



Exit menu. 🌷 icon appears in monitor when camera is in macro close-up.

4



Frame picture. If camera is zoomed out until 🌷 icon turns green, camera can focus at distance of 4 cm/1.6″.

Macro Close-up Mode

At short ranges, the viewfinder does not show the image that will appear in the final picture. Use the monitor for close-ups.

In macro close-up mode, the camera focuses continuously, even when the shutter-release button is not pressed halfway.

Macro close-up is not available in some shooting modes (28-39).

Assist and Scene Modes

Your Nikon digital camera offers a choice of four "assist" and eleven "scene" modes. In these modes, camera settings are automatically optimized for the selected subject type, sparing you the necessity of adjusting settings one-by-one.

Assist Modes

Assist modes are chosen by rotating the mode dial to the desired mode. Framing assist options are available to help you compose your shots.

Mode	Description	👁
Portrait assist	Use for portraits in which the main subject stands out clearly while background details are softened.	30
Landscape assist	Use to enhance outlines, colors, and contrast in skyscapes, forests, and other landscape shots, or to take portraits that feature a landmark in the background.	31
Sports assist	Use for sports shots that freeze motion in rapidly-moving subjects.	32
Night portrait assist	Use for portraits taken against a dimly-lit backdrop.	33

Scene Modes

Scene modes are selected by rotating the mode dial to SCENE and selecting the desired scene from a menu.

Mode	Description	👁
Party/Indoor	Use to capture background details or the effects of candlelight and other indoor lighting.	35
Beach/Snow	Use for bright subjects such as snowfields, beaches, and sunlit expanses of water.	35
Sunset	Use to preserve the deep hues seen in sunsets and sunrises.	35
Dusk/Dawn	Use to preserve the colors seen in the weak natural light before sunrise and after sunset.	35
Night landscape	Use when taking landscape shots at night.	36
Close up	Use to capture vivid colors in close-up shots of flowers, insects, and other small objects.	36
Museum	Use where flash photography is prohibited.	36
Fireworks show	Use to capture the expanding burst of light from a firework.	37
Copy	Use to copy text and line drawings.	37
Back light	Use when light is coming from behind your subject, throwing their features into shadow.	37
Panorama assist	Use when taking a series of pictures that will later be joined to form a single scene.	38

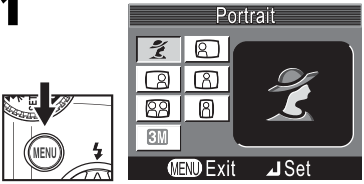
Assist and Scene Modes

Depending on your subject, assist and scene modes may not always produce the desired results. If results are not to your satisfaction, choose (auto) and try again.

Framing Assist

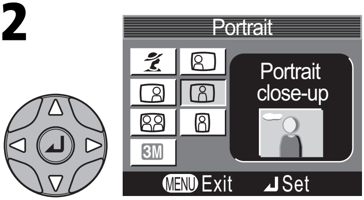
The four assist modes offer a selection of framing assist options that allow you to compose pictures with the help of framing guides displayed in the monitor. To use framing assist, rotate the mode dial to the desired mode and follow the steps below.

1



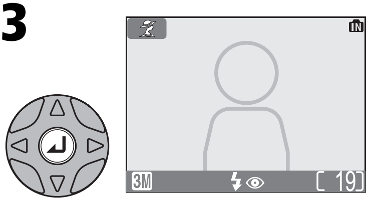
After selecting mode, display framing assist menu.

2



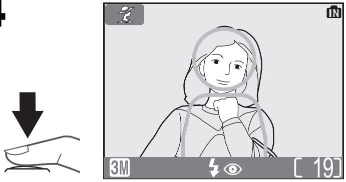
Choose composition type. Current selection shown by large icon and caption.

3



Make selection. To return to shooting mode, press the MENU button. Framing guide appears in monitor.

4



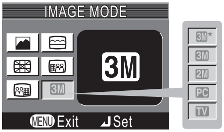
When taking pictures, position subject or subjects in framing guide as described on following pages.

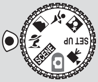
Using the Guides

Your subject does not have to fit exactly in the framing guides. ***When framing pictures, pay attention to your surroundings; be careful not to trip and fall.***

Image Mode

The image mode option is available in the assist mode menu (63).

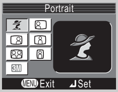




Portrait Assist

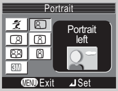
(portrait assist) mode helps you frame portraits in which the main subject stands out clearly while background details are softened, lending the composition a sense of depth (the degree of softening depends on the amount of light available). A framing assist menu helps you frame off-center subjects and compose tall or wide shots and two-person portraits.





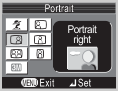
Portrait

No guides are displayed in monitor. Camera focuses on subject in center of frame; focus lock can be used to focus on off-center subjects.



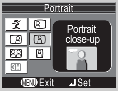
Portrait left

Use to compose shot with subject centered in left half of frame. Camera will focus on subject in framing guide.



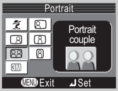
Portrait right

Use to compose shot with subject centered in right half of frame. Camera will focus on subject in framing guide.



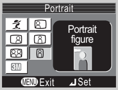
Portrait close-up

Use to compose shot with your subject's face positioned in top half of frame. Camera will focus on face area in framing guide.



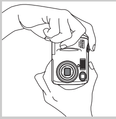
Portrait couple

Use to compose shot with two subjects positioned side-by-side. Camera will focus on closest subject.



Portrait figure

Use to compose shot with camera held as shown at right and subject's face in top half of frame. Camera will focus on face area in framing guide.



	*		OFF*		OFF

* Other modes can be selected.

Landscape Assist

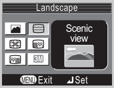
(landscape assist) mode helps you frame vivid landscape shots that enhance outlines, colors, and contrast. A framing assist menu helps you frame not only natural landscapes but also cityscapes and portrait shots featuring a landmark in the background.





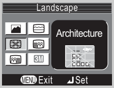
Landscape

No guides are displayed in monitor. Use to focus on distant objects through foreground objects such as windows or a screen of branches. Focus is fixed at infinity.



Scenic view

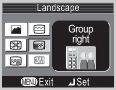
Use to compose landscapes with sky in top third of frame, distant objects in middle third, and closer objects in bottom third. Match top of skyline with wavy yellow guide.



Architecture

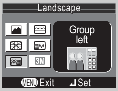
Use to photograph buildings. A grid is displayed in the monitor to help keep verticals and horizontals aligned with the frame.

			OFF*		OFF



Group right

Use to compose portraits with portrait subjects to right and landmark or other object in background at left of frame. Both portrait subject and back-ground object will be in focus.

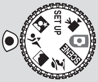


Group left

Use to compose portraits with portrait subjects to left and landmark or other object in background at right of frame. Both portrait subject and background object will be in focus.

	AUTO*		OFF*		OFF

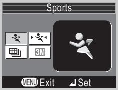
* Other modes can be selected.



Sports Assist

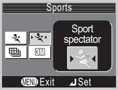
(sports assist) mode is used for dynamic action shots that capture moving objects. The assist menu lets you freeze the action in a single shot or record motion in a series of pictures.





Sports

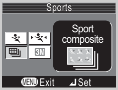
While shutter-release button is held down, pictures are recorded at rate of about 3 frames every 2 seconds (rate of shooting will slow when ⌛ icon is displayed). With E4100, camera records 9 shots when image mode is set to 4M Normal (2288). With E3200, camera records 3 shots when image mode is set to 3M Normal (2048), and with E2200, 6 shots when image mode is set to 2M (1600). Focus, exposure, and white balance are determined by first shot in each series. Camera focuses continuously, even when shutter-release button is not pressed.



Sport spectator

Sport spectator is ideal for capturing those instants when you have no time to compose the picture. Use at ranges of 3 m to infinity.

A series of shots can be taken by holding the shutter-release button down. Number of shots that can be taken is the same as for (Sports) mode.



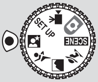
Sport composite

Each time shutter-release button is pressed, camera takes 16 shots in about two seconds and arranges them in four rows to form a single picture. Focus, exposure, and white balance are determined by first shot in each series.

⚡	⊘	⏲	OFF	❀	OFF

Sports Assist

In Sports or Sports composite mode, the focus is constantly reset until it is locked by pressing the shutter-release button halfway.



Night Portrait Assist



(night portrait assist) mode is used for taking portrait shots at night, when it provides a natural balance between the main subject and the background. Pictures taken at slow shutter speeds are adjusted to improve quality (E4100/E3200 only), slightly increasing processing time; to prevent blurring, mount the camera on a tripod or rest it on a flat, stable surface. For more information on framing assist options, see Portrait Assist (30).

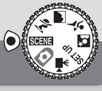
Flash	Self-timer	Macro
Auto with red-eye reduction	OFF*	OFF

* Other modes can be selected.

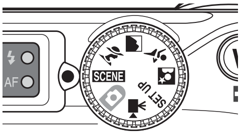
Flash Mode Selection in Night Portrait Assist Mode

Flash mode is automatically set to auto with red-eye reduction (auto with red-eye reduction).

SCENE Scene Mode

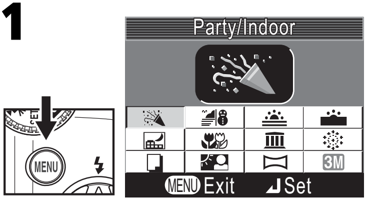


SCENE (scene) mode offers a menu of eleven "scenes," each corresponding to a common situation, such as a backlit subject, sunset, or interior shot. Camera settings are automatically adjusted to suit the selected scene, sparing you the necessity of adjusting each setting separately. To take pictures in scene mode, rotate the mode dial to SCENE and follow the steps below.



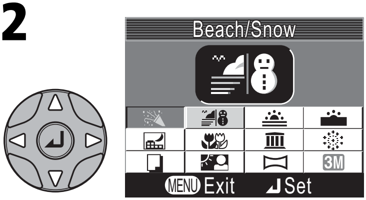
Scene mode

1



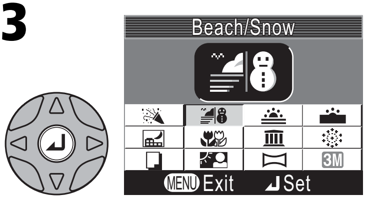
Display scene menu.

2



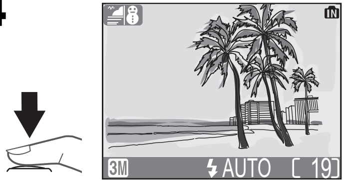
Choose scene. Current selection shown by large icon and caption.

3



Make selection. To return to shooting mode, press MENU. Selected scene shown by icon at top left corner of monitor.

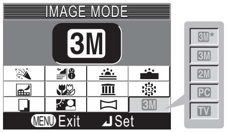
4



Take pictures.

Image Mode

Image mode can be selected in the scene menu. The current setting is shown when the image mode icon is highlighted.



The ✋ (Camera Shake) Icon

When the ✋ icon appears in the monitor, pictures may be blurred. In this section, the precautions that you can take to avoid blur are indicated by stars:

☆ hold camera in both hands and brace elbows against your body.

☆☆ use a tripod or rest the camera on a flat, level surface.

The following scenes are available:



Party/Indoor

Use for shots that include details of the background, or to capture the effects of candlelight and other indoor background lighting.

☆

⚡	⚡◉*	⏱	OFF*	🌷	OFF



Beach/Snow

Vividly captures the brightness of such subjects as snowfields, beaches, or sunlit expanses of water. Flash mode automatically set to **AUTO**; other modes can be selected.

⚡	Auto*	⏱	OFF*	🌷	OFF



Sunset

Preserves the deep hues seen in sunsets and sunrises.

☆

⚡	⊘*	⏱	OFF*	🌷	OFF



Dusk/Dawn

Preserves the colors seen in the weak natural light before sunrise or after sunset.

☆

Pictures taken at slow shutter speeds are processed to improve quality, slightly increasing time before pictures are saved to memory or memory card.

⚡	⊘	⏱	OFF*	🌷	OFF

* Other modes can be selected.



Night landscape

A slow shutter speed is used to produce stunning night landscapes. Focus is fixed at infinity.

☆☆

Pictures taken at slow shutter speeds are processed to improve quality, slightly increasing time before pictures are saved to memory or memory card.

Flash		Self-timer		Macro	
⚡	(flash off)	⏱	OFF*	🌷	OFF



Close up

Use to capture vivid colors in close-up shots of flowers, insects, and other small objects, with the background artistically blurred. Flash mode automatically set to **AUTO**; other modes can be selected.

☆

Camera focuses continuously, even when shutter-release button is not pressed halfway. Minimum focus distance varies with zoom position. To focus on objects as close as 4 cm/1.6″ to the lens, adjust zoom until the macro close-up icon (🌷) in monitor turns green.

Flash		Self-timer		Macro	
⚡	Auto*	⏱	OFF*	🌷	ON



Museum

Flash turns off (flash off) automatically. Use this mode indoors where flash photography is prohibited (for example, in museums and art galleries) or in other indoor settings in which you do not want to use the flash.

☆

- The Best Shot Selector (BSS; 65) turns on automatically, reducing the effects of inadvertent camera movement.
- Macro close-up turns off automatically; other modes can be selected.
- Photography may be prohibited altogether in some settings. Be sure to obtain permission first.

Flash		Self-timer		Macro	
⚡	(flash off)	⏱	OFF*	🌷	OFF*

* Other modes can be selected.

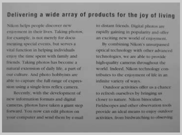


Fireworks show

Slow shutter speeds are used to capture the expanding burst of light from a firework. The camera responds more rapidly to the shutter-release button, ensuring that you can capture the start of the burst. ☆☆

- Focus is fixed at infinity.
- Follow the firework as it ascends and press the shutter-release button all the way down at the start of the burst.

			OFF		OFF


Delivering a wide array of products for the joy of living

Nikon helps people discover new enjoyment in their lives. Taking photos, for example, is not merely for documenting special events, but serves a vital function in helping individuals enjoy the time spent with family and friends. Taking photos has become a natural extension of daily life, a part of our culture. And photo hobbyists are able to capture the full range of expression using a single-lens reflex camera.

Recently, with the development of new information formats and digital cameras, photos have taken a giant step forward. You now can edit photos on your computer and send them by e-mail to distant friends. Digital photos are rapidly gaining in popularity and offer an exciting new world of enjoyment.

By combining Nikon's unsurpassed optical technology with other advanced technologies, we are able to provide high-quality cameras throughout the world. Indeed, Nikon technology contributes to the enjoyment of life in an infinite variety of ways.

Outdoor activities offer us a chance to refresh ourselves by bringing us closer to nature. Nikon binoculars, Fieldscopes and other observation tools provide an ideal means to enjoy outdoor activities, from birdwatching to observing

Copy

Provides clear pictures of text or drawings on a white board or in printed matter such as a business card.

- Flash and macro close-up turn off automatically; other modes can be selected.
- Colored text and drawings may not show up well in the final picture.

	*		OFF		OFF



Back light

Use when light is coming from behind your subject, throwing their features into shadow, or when your subject is in the shade but the background is brightly lit. The flash will fire automatically to "fill in" (illuminate) shadows.

			OFF*		OFF

* Other modes can be selected.



Panorama assist

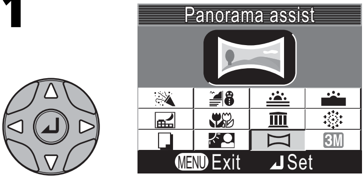
Use to take a series of photographs that you will later join to form a single scene (for example, a panorama or 360° virtual-reality image).

⚡	⊘*	⏱	OFF	✿	OFF*

* Other modes can be selected.

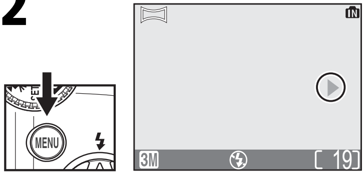
To use panorama assist, follow the steps below.

1



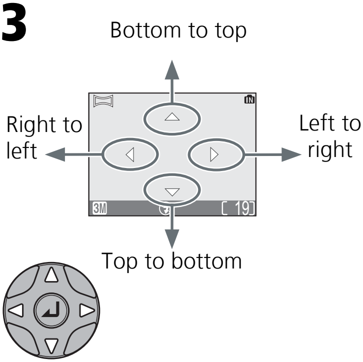
Highlight (Panorama Assist), and press the center of the multi selector.

2



Pan direction displayed in greenish yellow.

3

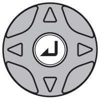


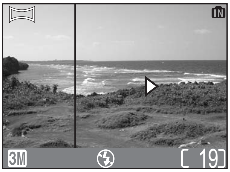
Select how pictures will be joined together in completed panorama. This is the direction in which to pan the camera after each shot.

Joining Panorama Pictures

Transfer the pictures taken with Panorama Assist to your computer (45) and use the Panorama Maker function in PictureProject to join them into a single scene. For further information, see the *PictureProject Reference Manual* (on CD-ROM).

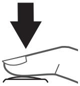
4





Make selection (to change selected pan direction, press center of multi selector and repeat steps 3–4). Pan direction displayed in white.

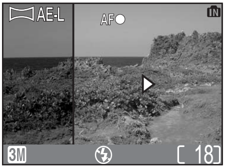
5





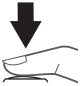
Take first picture. About one third of picture is shown superimposed on view through lens (if pan direction is left to right, picture will appear on left side of monitor).

6



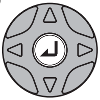
Compose the next shot to overlap with the previous picture.

7



Take the next picture.
Repeat steps 6 and 7 until all shots in series have been taken.

8



End series. Shooting will also end if a new mode is selected or camera enters standby mode.

Panorama Assist

The pan direction, flash mode, macro close-up mode, and exposure compensation can not be changed after the first picture is taken. To change the pan direction, press the MENU button to end shooting and repeat steps 1–3.

Using a Tripod

Using a tripod makes it easier to compose shots so that they overlap.

Storage Locations for Panoramas

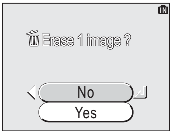
Each series of pictures taken at Panorama assist is stored in a separate folder with a name consisting of "P_" preceded by a three-digit folder number and followed by a three-digit sequence number (e.g., "101P_002").

Viewing Pictures on the Camera

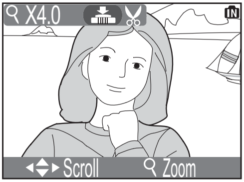
Viewing Multiple Pictures: Thumbnail Playback

Pressing the (**W**) button in full-screen playback displays the pictures in the memory or on the memory card in "contact sheets" of four thumbnail images. The following operations can be performed while thumbnails are displayed:

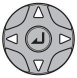
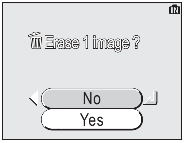


To	Press	Description
Highlight pictures		Press multi selector up, down, left or right to highlight pictures. Press center of multi selector to return to full-screen playback.
Change number of pictures displayed	(**W**)/ (**T**)	With four thumbnails displayed, press (**W**) button once to view nine thumbnails. Press (**T**) to "zoom in" from nine thumbnails to four-thumbnail view, or, when four thumbnails are displayed, to return to full-screen playback.
Cancel thumbnail playback		Cancel thumbnail playback and return to full-screen playback.
Delete highlighted picture		Confirmation dialog will be displayed. Press multi selector up or down to highlight option, press the center of the multi selector to select. 

Taking a Closer Look: Playback Zoom



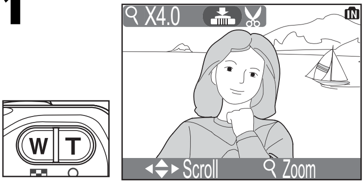
Use the ⚲ (**T**) button to zoom in on still images displayed in full-screen playback. While the picture is zoomed in, you can save a cropped copy of the picture that contains only the portion of the image visible in the monitor. Playback zoom and cropping are not available when the current picture is a movie or a copy created using the small picture option (60, 78). Cropped copies can not be further cropped.

To	Press	Description
Zoom in	⚲ (**T**)	Zoom increases each time button is pressed, to a maximum of 10×. While image is zoomed in, ⚲ icon and zoom ratio are displayed in top left corner of monitor.
View other areas of picture		Use multi selector to scroll to areas of picture not visible in monitor. To use multi selector to view other pictures, cancel zoom.
Zoom out	▦ (**W**)	Zoom decreases each time ▦ (**W**) button is pressed. To cancel zoom, zoom picture out until entire picture is displayed.
Cancel zoom		Cancel zoom and return to full-screen playback.
Crop picture		Only portion of picture visible in monitor can be cropped.
Delete picture		Confirmation dialog will be displayed. Press multi selector up or down to highlight option, press the center of the multi selector to select. 

Cropping Pictures

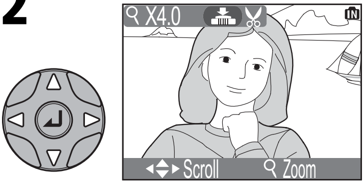
This option lets you crop part of a picture and save it as a separate file.

1



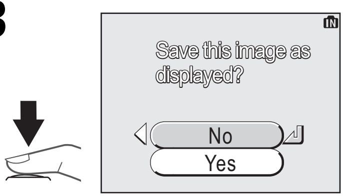
Zoom picture in and out.

2



Scroll picture. Repeat steps 1 and 2 until desired portion of image is displayed in monitor.

3



Confirmation dialog displayed. Select **Yes** to create cropped copy, **No** to exit without creating copy, then press the center of the multi selector.

To view the new, cropped copy, press the multi selector down until the copy is displayed.

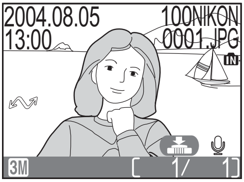
Cropped pictures are stored as JPEG files (compression ratio 1 : 8). Depending on the size of the original and the zoom ratio at the time the copy was created, copies will be 2,288 × 1,712 (E4100 only), 2,048 × 1,536 (E3200 only), 1,600 × 1,200, 1,280 × 960, 1,024 × 768, 640 × 480, 320 × 240, or 160 × 120 pixels in size. Copies are stored in separate files in the memory or on the memory card with names of the form "RSCN*nnnn*.JPG," where "*nnnn*" is a four-digit number assigned automatically by the camera.

Photo Trim

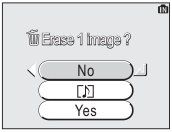
- Cropped pictures are stored with the same recording date and time as the original.
- Resized copies and cropped copies can not be cropped.
- If a cropped copy created using the E4100/E3200/E2200 is viewed on a different digital camera, the picture may not be displayed or it may not be possible to transfer it to a computer.

Voice Memos: Recording and Playback (E4100/E3200 only)

Using the camera's microphone, you can record a voice memo by pressing the shutter-release button while a picture with the 🎤 icon is displayed in full-screen playback (22). Do not touch the microphone during recording. Voice memos cannot be recorded or played back for movies (56) or during thumbnail playback (40) or playback zoom (41).



If a voice memo already exists for the current picture, [♪] (voice memo icon) and [♪] (voice memo playback guide) are displayed and a new voice memo can not be recorded.

To	Press	Description
Record voice memo	(shutter-release button)	If 🎤 icon is displayed on current picture, memo will be recorded while shutter-release button is held down. During recording, ●REC icon blinks. Recording ends after about 20s or when shutter-release button is released. Do not touch microphone during recording.
Play voice memo	(shutter-release button)	Pictures for which voice memo exists are marked by ♪ icon. Press shutter-release button to play voice memo. Playback ends when voice memo ends or shutter-release button is pressed again.
Change volume	(**W**)/ (**T**)	Zoom buttons control volume during playback. Press (**W**) to lower volume, (**T**) to increase. Volume can also be adjusted using **Sound settings** > **Volume** option in setup menu (90).
Delete picture or voice memo	🗑	Confirmation dialog will be displayed. Press multi selector up or down to highlight option, press the center of the multi selector to select. • Select **No** to exit without deleting picture or voice memo. • Select [♪] to delete voice memo only. • Select **Yes** to delete both picture and voice memo. 

Voice Memos

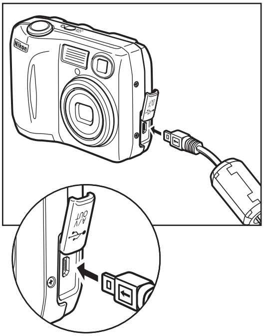
Voice memo file names consist of an identifier ("DSCN" for memos appended to original pictures, "SND_" for memos appended to copies), a four-digit file number copied from the associated picture, and the extension ".WAV" (e.g., "DSCN0015.WAV").

Viewing Pictures on TV

Using the EG-CP14 audio/video (AV) cable (E4100/E3200) or EG-CP11 video cable (E2200) included with your camera, you can connect the camera to a television or video-cassette recorder (VCR).

Choosing a Video Mode

The **Video mode** item in the camera setup menu offers a choice of NTSC and PAL standards (94). Be sure that the standard selected matches that used in the device.

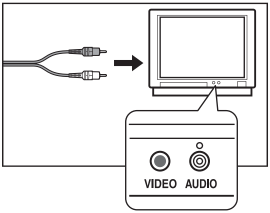


1 Turn the camera off

- Turn the camera off before connecting or disconnecting the AV/video cable.

2 Connect the AV/video cable to the camera

- Open the interface connector cover and insert the black plug into the camera's interface connector.



3 Connect the AV/video cable to the television or VCR

- [E4100/E3200] Insert the yellow plug on the AV cable into the video-in jack on the television or VCR and the white plug into the audio-in jack.
- [E2200] Insert the yellow plug on the video cable into the video-in jack on the television or VCR.

4 Turn the camera on

- Press the ▶ button for about a second to turn the camera on. The camera monitor will remain off and the television will display the image normally shown in the monitor. If the camera is connected to a VCR, images can be recorded to video tape.

Viewing Pictures on a Computer

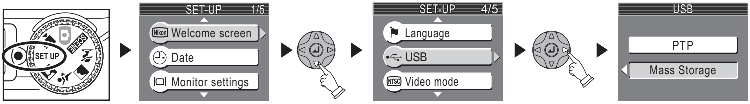
Using the UC-E6 USB cable and PictureProject software provided with your camera, you can view your photographs and movies on a computer. Before you can transfer (copy) pictures to your computer, you will need to install PictureProject. For more information on installing PictureProject and transferring pictures to your computer, see the *Quick Start Guide* and the *PictureProject Reference Manual*.

Before Connecting the Camera

Pictures can be copied from the camera to the computer by:

- Pressing the ◷ (⤻) button on the camera (☞ 76)
- Clicking the [⤻] button in PictureProject

Which method you will use depends on your computer's operating system and the USB option selected in the camera setup menu. After consulting the following table, select the appropriate option using the **USB** item in the camera setup menu. The default option is **Mass Storage**.



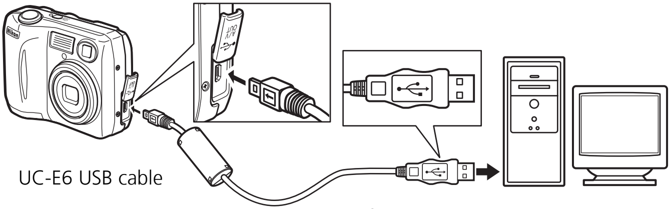
Operating system	Pictures transferred using:	
	Camera ◷ (⤻) button*	**PictureProject [⤻] button**
Windows XP Home Edition Windows XP Professional	Choose **Mass Storage** or **PTP**.	
Windows 2000 Professional Windows Millennium Edition (Me) Windows 98 Second Edition (SE)	Choose **Mass Storage**.	
Mac OS X 10.1.5 or later	Choose **PTP**.	Choose **Mass Storage** or **PTP**.

* The camera ◷ (⤻) button can not be used to transfer pictures in the following cases. Use the PictureProject [⤻] button.

- When transferring pictures from the camera memory and **Mass Storage** is selected for the USB option
- When the memory card write-protect switch is in the "lock" position. Unlock by sliding the switch to the "write" position before transferring pictures.

Connecting the USB Cable

Turn the computer on and wait for it to start up. After confirming that the camera is off, connect the UC-E6 USB cable as shown below. Connect the camera directly to the computer; do not connect the cable via a USB hub or keyboard.



You can now turn the camera on and transfer pictures as described in the Quick Start Guide.

Windows 2000 Professional, Windows Millennium Edition (Me), Windows 98 Second Edition (SE)

Do NOT select **PTP** when connecting the camera to a computer running one of the above operating systems. If you have connected the camera to a computer running one of the above operating systems with **PTP** selected in the **USB** menu, disconnect the camera as described below. Be sure to select **Mass Storage** before reconnecting the camera.

Windows 2000 Professional

A dialog will be displayed welcoming you to the Found New Hardware Wizard.

Click **Cancel** to close the dialog, and then disconnect the camera.

Windows Millennium Edition (Me)

After displaying a message stating that the hardware information database is being updated, the computer will start the Add New Hardware Wizard. Click **Cancel** to exit the wizard, and then disconnect the camera.

Windows 98 Second Edition (SE)

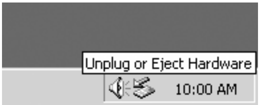
The Add New Hardware Wizard will be displayed. Click **Cancel** to exit the wizard, and then disconnect the camera.

Disconnecting the Camera

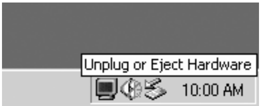
If **PTP** is selected in the **USB** menu, you can turn the camera off and disconnect the USB cable once transfer is complete. If you have not changed the **USB** option in the camera setup menu from its default setting of **Mass Storage**, you must remove the camera from the system as shown below before turning the camera off or disconnecting the cable.



Windows XP Home Edition/Windows XP Professional
Click the "Safely Remove Hardware" icon ( ) in the taskbar and select **Safely remove USB Mass Storage Device** from the menu that appears.



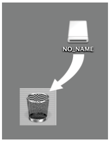
Windows 2000 Professional
Click the "Unplug or Eject Hardware" icon ( ) in the taskbar and select **Stop USB Mass Storage Device** from the menu that appears.



Windows Millennium Edition (Me)
Click the "Unplug or Eject Hardware" icon ( ) in the taskbar and select **Stop USB Disk** from the menu that appears.



Windows 98 Second Edition (SE)
In My Computer, click with the right mouse button on the removable disk corresponding to the camera and select **Eject** from the menu that appears.



Mac OS X

Mac OS X
Drag the "NO_NAME" camera volume into the Trash.

Printing Pictures

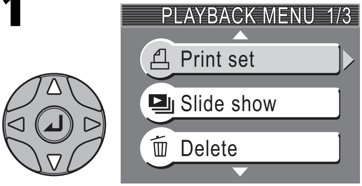
Pictures stored in the memory or on the memory card can be printed in the same way as pictures taken with a film camera. Using the **Print set** option in the playback menu, you can specify the pictures to be printed, the number of prints, and the information to be included with each print.

Printing pictures

Pictures can be printed as follows.

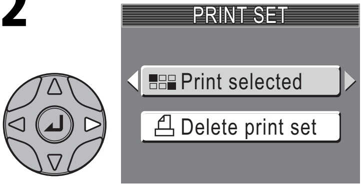
- By printer or at a photo lab
  Pictures can be printed by inserting a memory card containing pictures into a printer or having prints made at a digital photo lab. If a print order has been created, the printer or photo lab must support DPOF.
  Pictures stored in the camera memory can be printed. They must be copied to the memory card (79). Copy the pictures before creating a print order.
- By a printer that supports PictBridge (52)
  Connect the camera to a printer that supports PictBridge to print pictures. Print order data can be used.
- By transferring pictures to a PC and printing them
  For more information, see the *PictureProject Reference Manual*.

1



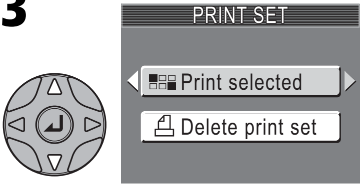
Highlight **Print set**.

2



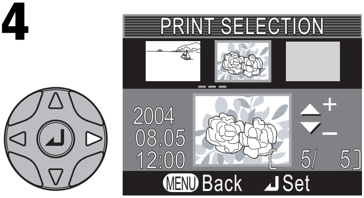
Display PRINT SET menu.

3



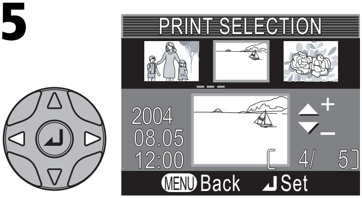
Highlight **Print selected**.

4



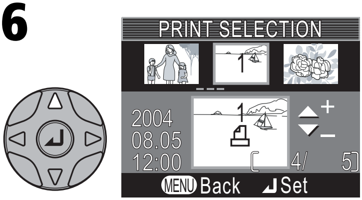
Pictures on memory card displayed as thumbnail images.

5



Highlight picture.

6

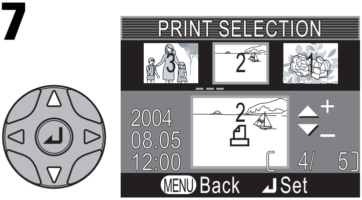


Select highlighted picture. Selected pictures marked by 🖶 icon.

"Delete print set"

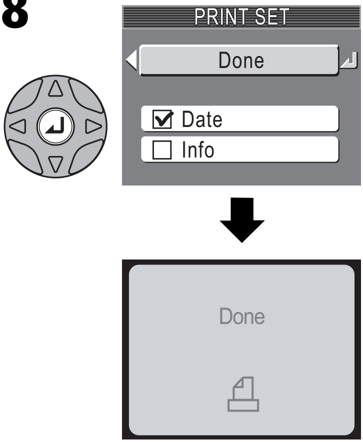
To cancel the current print order, highlight **Delete print set** in the PRINT SET menu and press the multi selector to the right. Print marking will be removed from all pictures in the current print order; the pictures themselves will not be deleted.

7



Use multi selector to specify number of prints (up to 9). To deselect picture, press multi selector down until icon disappears. Repeat steps 5-7 to select additional pictures. To exit without altering print order, press MENU button.

8



Press the center of the multi selector to complete print order and display menu of print options.

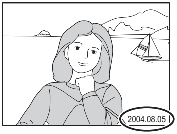
- To print date of recording on all pictures in print order, highlight **Date** and press the center of the multi selector.
  Check will appear in box next to item.
- To print shutter speed and aperture on all pictures in print order, highlight **Info** and press the center of the multi selector.
  Check will appear in box next to item.
- To deselect checked item, highlight and press the center of the multi selector.
- To complete print order and return to playback, highlight **Done** and press the center of the multi selector. **Done** is displayed and the screen returns to the playback menu. Press the **Menu** button to return to full-screen playback. To exit without altering print order, press MENU button.

Print Set

If you display the PRINT SET menu after creating a print order, the **Date** and **Info** options will be reset.

"Date"

If **Date** is selected, the date of recording will appear on pictures printed using DPOF. The date is based on the photo information recorded with the picture, and will not be correct if the camera clock was set incorrectly when the picture was taken (☞ 14-15). The date will not be printed if the print system does not support the DPOF date function.

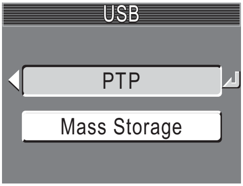


The date stamp recorded when **Date** or **Date and time** is selected for **Date imprint** (☞ 87) forms a permanent part of the image and will appear whenever the pictures are printed, even if the printer does not support the DPOF date function. **Print set** can not be used to print the time and date of recording on pictures recorded when **Date** or **Date and time** is selected for **Date imprint**.

Printing Via Direct USB Connection

Your camera allows pictures to be printed directly from the camera using PictBridge. If the UC-E6 USB cable is used to connect the camera to a printer that supports PictBridge, pictures can be printed directly from the memory or memory card without having to be transferred to a computer.

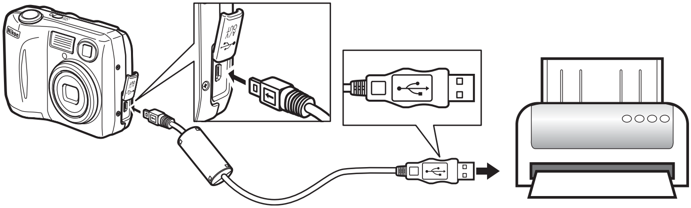
1



Select **PTP** in the camera USB menu.

- For more information on selecting the USB option, see "Viewing Pictures on a Computer" (☞ 45).

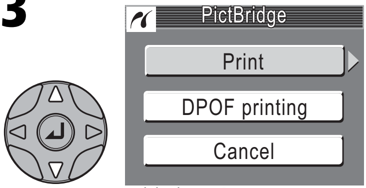
2



After confirming that the camera is off, connect the UC-E6 USB cable as shown above.

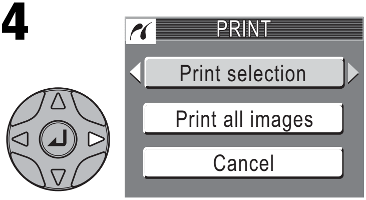
You can now turn the camera and printer on.

3



Highlight **Print**.

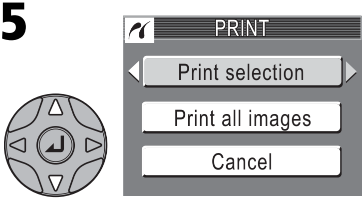
4



Display options.

Option	Description
Print selection	Select picture and specify number of prints.
Print all images	All pictures in internal memory or on memory card are printed.
DPOF printing	Pictures for which print order has been created are printed accordingly.

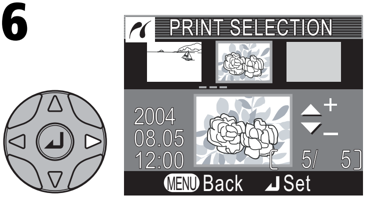
5



Highlight **Print selection**. *

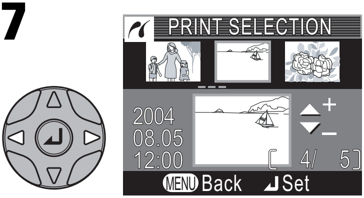
* To print one copy of all pictures on memory card, highlight **Print all images** and press multi selector to right.

6



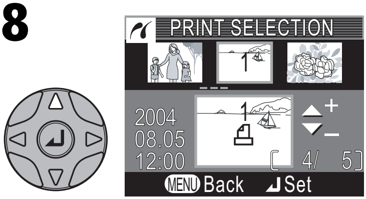
Display selection dialog.

7



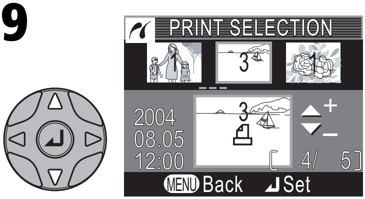
Scroll through pictures. Current picture shown at bottom of display.

8



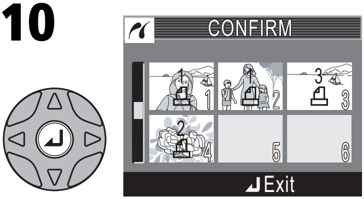
Select current picture and set number of prints to 1. Selected pictures marked by 🖶 icon.

9



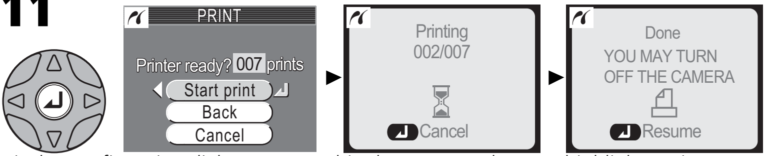
Use multi selector to specify number of prints (up to 9). To deselect picture, press multi selector down when number of prints is 1. Repeat steps 7–9 to select additional pictures.

10



View selected pictures. Press multi selector up, right, left, or down to view pictures not visible in display.

11



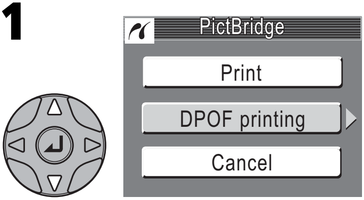
Display confirmation dialog. Press multi selector up or down to highlight option, press center to select.

- Select **Start print** to start printing. To interrupt printing, press center of multi selector, then turn camera off and disconnect USB cable.
- Select **Back** to return to print selection dialog shown in Step 6.
- Select **Cancel** to exit without printing pictures.
- Select **Resume** to return to Step 3.

Message shown above at right is displayed when printing is complete. Turn camera off and disconnect USB cable.

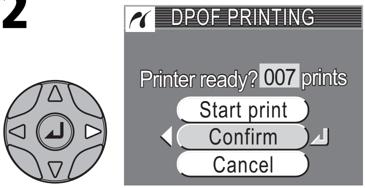
To print the current print order:

1



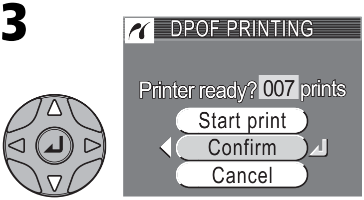
Highlight **DPOF printing**.

2



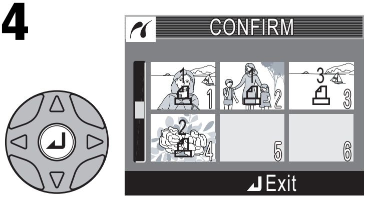
Display options.

3



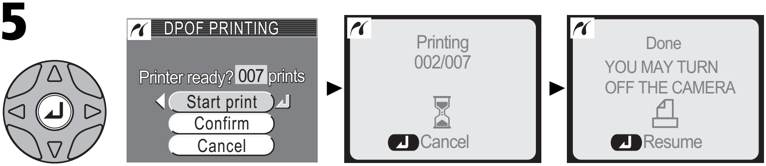
Highlight **Confirm** (to exit without printing pictures, highlight **Cancel** and press center of multi selector).

4



Display print order. Press multi selector up, right, left, or down to view pictures not visible in display.

5



Display confirmation dialog. Press multi selector up or down to highlight option, press center to select.

- Select **Start print** to start printing. To interrupt printing, press center of multi selector, then turn camera off and disconnect USB cable.
- Select **Cancel** to exit without printing pictures.

Message shown above at right is displayed when printing is complete. Turn camera off and disconnect USB cable.

Before Printing

Before printing via direct USB connection, make sure that the printer supports PictBridge or USB Direct and check printer settings. See the printer manual for details.

Use a Reliable Power Source

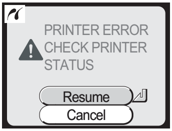
When printing pictures via direct USB connection, be sure the battery is fully charged. If in doubt, recharge the battery before printing or use the optional EH-62B AC adapter.

DPOF Printing

The DPOF printing option is only available if a print order has been created.

Error Messages

If an error message is displayed, an error has occurred. After checking the printer and resolving any problems as directed in the printer manual, highlight **Resume** and press the center of the multi selector to resume printing. Select **Cancel** to exit without printing the remaining images.

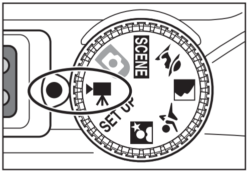


PictBridge

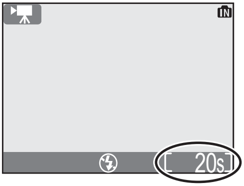
PictBridge is an industry standard for direct printing that ensures compatibility when different devices are connected.

Recording Movies

Movies can be recorded with sound recorded via the camera's built-in microphone, using the E4100/E3200, or silent movies using the E2200:

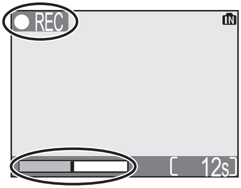


1 Rotate the mode dial to



2 Turn the camera on

The monitor shows the length of the movie that can be recorded.



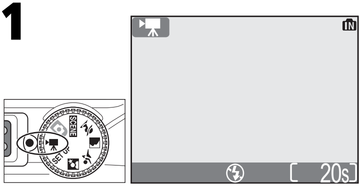
3 Start recording

Press the shutter-release button all the way down to start recording. During recording, the ●**REC** icon blinks and progress is shown by the indicator at the bottom of the monitor.

- Recording will end automatically when no more memory is available in the memory or on the memory card.

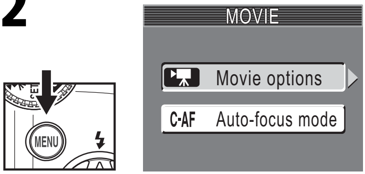
To select a movie mode:

1



Select Mode.

2



Display MOVIE menu.

The type of movie recorded can be selected from the following options:

Type	Description	Length of movie *1		
		Memory	Memory card	
			128 MB	256-512 MB
TV movie (640) TV	Movies are recorded at a rate of 15 frames per second. Vertical interlacing is used to achieve a size of 640 × 480 pixels, suitable for television playback.	Approx. 26 sec.	Approx. 223 sec.	Approx. 448 sec.*2
Small size (320) (**default option**)	Movies are recorded at a rate of 15 frames per second. Each frame has a size of 320 × 240 pixels.	Approx. 52 sec.	Approx. 438 sec.	Approx. 881 sec.*2
Smaller size (160) LP	Movies are recorded at a rate of 15 frames per second. Each frame has a size of 160 × 120 pixels. Small size allows longer movies to be recorded.	Approx. 211 sec.	Approx. 1754 sec.	Approx. 3525 sec.*2

*1 Total recording time shown is approximate.Time may vary depending on type of memory card used.
*2 With E2200, even if a memory card over 256 MB is used, total recording time will be the same as for a 128 MB memory card.

Flash Mode Selection in Mode

The flash turns off (⊕) automatically when movie mode is selected.

Digital Zoom

Digital zoom can not be used while recording is in progress.

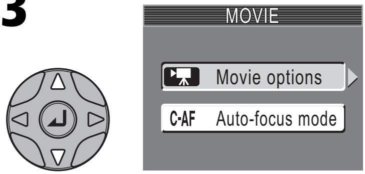
Notes on Movies

Depending on the make of memory card used, recording may end before the memory card is full (101). During recording with E4100/E3200, do not touch the built-in microphone. To prevent the sound of the camera focusing from interfering with recording, select a focus mode of **Single AF**.
The progress indicator stops at 999s. Recording can continue past this point if enough memory is available on the memory card.

Movies

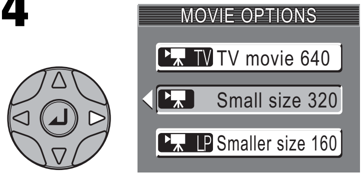
Movies are recorded as Quick Time movie files with the extension ".MOV" and can be played back on a computer after transfer.

3



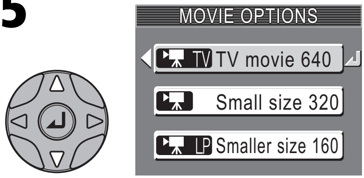
Highlight **Movie options**.

4



Display MOVIE OPTIONS menu.

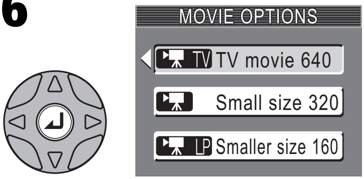
5



Highlight mode.*

* To exit without changing mode, press MENU button.

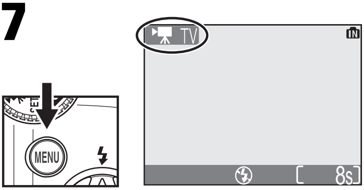
6



Make selection.†

† To return to MOVIE menu after making selection, press multi selector to left.

7



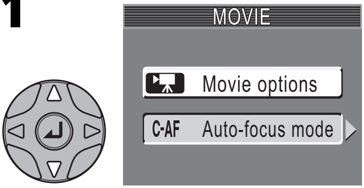
Return to shooting mode. Selected movie mode shown in monitor.

The movie menu also includes the following focus options (E4100/E3200 only):

Focus mode	Description
Single AF S-AF	Camera focuses when shutter-release button is pressed halfway. Focus locks when focus operation is complete.
Continuous AF C-AF	Camera adjusts focus continuously.

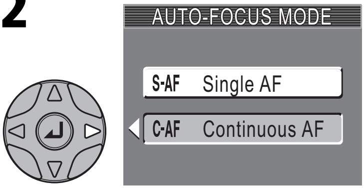
To choose a focus option from the MOVIE menu:

1



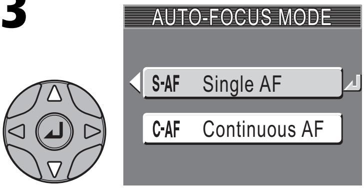
Highlight **Auto-focus mode**.

2



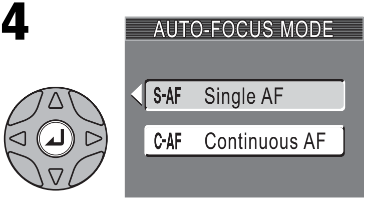
Display options.

3



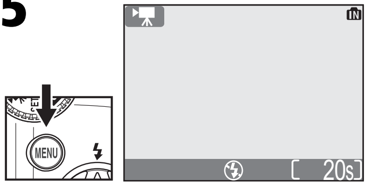
Highlight desired focus mode.

4



Make selection.

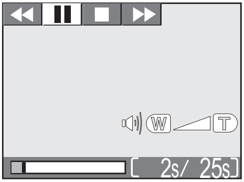
5



Return to shooting mode.

Viewing Movies

In full-screen playback mode (📖 22), movies can be played with sound (E4100/E3200 only). Movies are indicated by a 🎥 icon and can be viewed by pressing the center of the multi selector. Playback controls are displayed at the top of the monitor; press the multi selector to left or right to highlight a control, then press the center of multi selector to perform the selected operation.



To	Press	Description
Rewind	◀◀	While movie is in progress, use multi selector to select ◀◀ icon, then press and hold center of multi selector.
Fast forward	▶▶	Use multi selector to select ▶▶ icon, then press and hold center of multi selector. Playback ends at the last frame; once playback has ended, the first frame of movie will be displayed.
Pause playback	❚❚	Use multi selector to select ❚❚ icon, then press center of multi selector to pause display.
Rewind movie one frame	◀❚❚	When movie is paused, use multi selector to select ◀❚❚ icon, then press center of multi selector.
Advance movie one frame	❚❚▶	When movie is paused, use multi selector to select ❚❚▶ icon, then press center of multi selector.
Resume playback	▶	When movie is paused, use multi selector to select ▶ icon, then press center of multi selector.
Stop playback	■	Use multi selector to select ■ icon, then press center of multi selector to return to full-screen playback.

Playback Volume (E4100/E3200 only)

The zoom buttons control volume during playback. Press ⊞ (**W**) to decrease volume, 🔍 (**T**) to increase. With E3200, using the zoom buttons to change the volume during playback also changes the master volume (📖 90).

Deleting Movies

To delete a movie, press the 🗑 button. A confirmation dialog will be displayed; press the multi selector up or down to highlight an option, then press the center of the multi selector.

- **Yes**: delete movie and return to full-screen playback
- **No**: exit to full-screen playback without deleting movie

Using the Shooting Menu

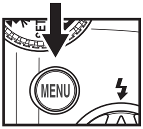
In [camera icon] (auto) mode, the following settings can be adjusted from the shooting menu:

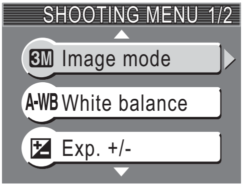
Option	Description	[page icon]
Image mode	Choose image size and quality.	63-64
White balance	Match white balance to your light source.	65
Exp. +/-	Adjust exposure for very bright, very dark, or high-contrast subjects.	67
Continuous	Take pictures one at a time or in a sequence.	68
BSS	Turn the Best Shot Selector (BSS) on or off.	69
Color options	Choose a standard color, vivid color, black-and-white, sepia, or cyanotype effect for your pictures.	70

In [camera icon] (auto) mode, the shooting menu is displayed when the MENU button is pressed.

To make a selection from the shooting menu:

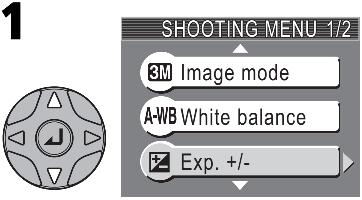
1





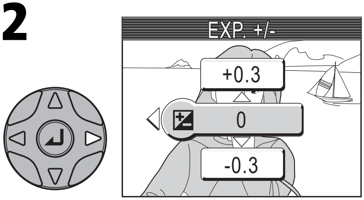
Display shooting menu.

1



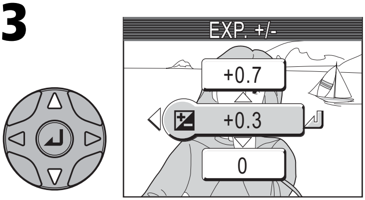
Highlight menu item.

2



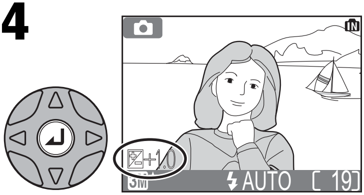
Display options.

3



Highlight option (to return to previous step, press multi selector to left).

4

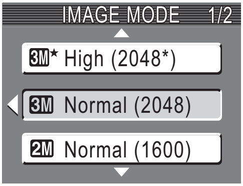


Make selection. To exit menu and return to shooting mode, press MENU button.

Image Mode

MENU ▶ 3M Image mode

Pictures taken with a digital camera are recorded as image files. The size of the files, and with it the number of images that can be recorded in the memory or on the memory card, depends on the size and quality of the images. Before shooting, choose image quality and size according to how you plan to use the picture.



Option	Size (pixels)	Quality*	Description	Print size (cm)†
4M* (2288*) (E4100 only)	2,288 × 1,712	1 : 4	High quality, suitable for enlargements or high-quality prints.	19 × 14 (7.5″ × 5.5″)
3M* (2048*) (E3200 only)	2,048 × 1,536			17 × 13 (7″ × 5″)
2M* (1600*) (E2200 only)	1,600 × 1,200			13 × 10 (5″ × 4″)
4M (2288) (E4100 only)	2,288 × 1,712	1 : 8	Best choice in most situations.	19 × 14 (7.5″ × 5.5″)
3M (2048) (E3200 only)	2,048 × 1,536			17 × 13 (7″ × 5″)
2M (1600)	1,600 × 1,200	1 : 8	Smaller size allows more pictures to be stored on memory card.	13 × 10 (5″ × 4″)
PC PC screen (1024)	1,024 × 768	1 : 8	Suited to display on computer monitors 17″ or larger.	9 × 7 (3.5″ × 2.5″)
TV TV screen (640)	640 × 480	1 : 8	Can be displayed full-screen on a television or 13″ monitor. Suited to distribution by e-mail or the web.	5 × 4 (2″ × 1.5″)

* To reduce the amount of memory each shot occupies, pictures are compressed as they are saved to the memory or memory card. Compression selectively reduces the quality of the image. The more a picture is compressed, the more noticeable this loss of quality is likely to be. The figures show the appropriate compression ratio for each setting.

† All figures are approximate. Dimensions in "Description" column assume a printer resolution of approximately 200 dpi, dimensions in "Print size" column a resolution of approximately 300 dpi.

If in doubt, choose **Normal (2288)**, **Normal (2048)** or **Normal (1600)**. Pictures can be reduced or cropped when played back in the monitor after shooting (☞ 42, 78).

The following table shows the approximate number of pictures that can be stored in the memory or on 128- and 256-megabyte memory cards at different image mode settings.

Image mode	Memory	Memory card	
	14.5 MB	128 MB	256 MB
High (2288*) (E4100 only)	Approx. 7	Approx. 64	Approx. 131
High (2048*) (E3200 only)	Approx. 9	Approx. 78	Approx. 157
High (1600*) (E2200 only)	Approx. 15	Approx. 125	Approx. 252
Normal (2288) (E4100 only)	Approx. 15	Approx. 125	Approx. 255
Normal (2048) (E3200 only)	Approx. 18	Approx. 153	Approx. 308
Normal (1600)	Approx. 29	Approx. 239	Approx. 482
PC screen (1024)	Approx. 61	Approx. 511	Approx. 1028
TV screen (640)	Approx. 132	Approx. 1096	Approx. 2203

* All figures are approximate. File size of pictures depends on scene recorded, producing wide variations in number of images that can be stored.

Image Mode and Number of Exposures Remaining

The figure shown in the monitor for the number of exposures remaining is only an approximation. The file size of compressed images varies with the scene recorded, producing wide variations in the number of pictures that can be stored.

Image Size

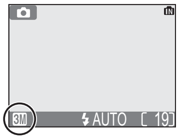
Smaller images create smaller files suited to transmission by e-mail or use in web pages. When printed at larger sizes, however, small images will be rough and uneven in appearance.

Print Size

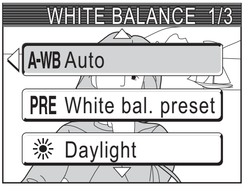
The size of images when printed depends on the printer resolution: the higher the resolution, the smaller the final print size.

Image Mode

The current image mode setting is shown by an icon at the bottom left corner of the monitor.



White Balance



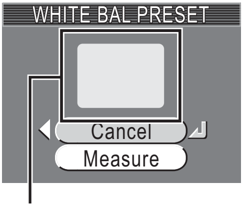
The color of the light reflected from an object varies with the color of the light source. The human brain is able to adapt to such changes in color, with the result that we see white objects as white, regardless of whether they are in the shade, direct sunlight, or under incandescent lighting. Digital cameras can mimic this adjustment by processing information from the camera's image sensor (CCD) according to the color of the light source. This process is known as a "white balance adjustment."

- If you cannot achieve the desired white balance with Auto (A-WB) or you want to lock the white balance for a specific light source or shooting conditions, choose a setting other than Auto (A-WB).
- When the white balance setting is changed, the new setting is reflected in the picture in the monitor.

Option	Description
A-WB **Auto**	White balance automatically adjusted to suit lighting conditions. Best choice in most situations.
PRE **White bal. preset**	Gray object used as reference to set white balance under unusual lighting conditions.
Daylight	White balance adjusted for direct sunlight.
Incandescent	Use under incandescent lighting.
Fluorescent	Use under most types of fluorescent lighting.
Cloudy	Use when taking pictures under overcast skies.
Speedlight	Use with the flash.

Preset White Balance

Preset white balance is used when shooting under mixed lighting or to compensate for light sources with a strong color cast (for example, to make pictures taken under a lamp with a red shade look as though they had been taken under white light). When PRE (**White bal. preset**) is selected from the white-balance menu, the camera will zoom in and the menu shown at right will be displayed in the monitor.

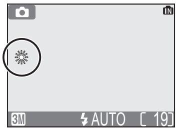


White balance measuring window

Option	Description
Cancel	Recalls the most recent value for preset white balance from memory and sets white balance to this value.
Measure	To measure a new value for white balance, place a gray object, such as a piece of cardboard, under the lighting that will be used in the final picture. Frame this object so that it fills the square in the center of the menu shown above. Highlight **Measure** and press the center of the multi selector to measure a new value for white balance (shutter will be released and camera will return to original zoom position, but no picture will be recorded).

White Balance

At settings other than auto, white balance is shown by an icon in the monitor.

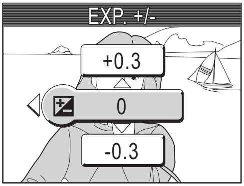


Exp. +/-



The **Exp. +/-** (exposure compensation) menu is used to alter exposure from the value suggested by the camera, making pictures brighter or darker. Exposure can be adjusted in the range -2.0 to +2.0 EV.

- When the exposure compensation is altered, the new setting is reflected in the picture in the monitor.

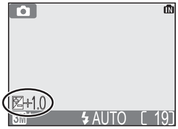


Choosing an Exposure Compensation Value

As a rule of thumb, select positive values when large areas of the frame are very brightly lit (for example, when photographing an expanse of sunlit water, sand, or snow) or when the background is much brighter than the main subject. Choose negative values when large areas of the frame are very dark (for example, when photographing a forest of dark green leaves) or when the background is much darker than the main subject. This is because the camera, in order to avoid extreme over- or under-exposure, tends to lower exposure when the frame is very bright and raise exposure when the frame is very dark, which can make naturally bright subjects look dim and naturally dark subjects appear over-bright, or "washed out."

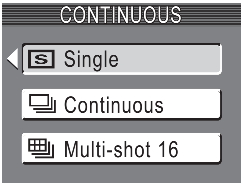
Exposure Compensation

At settings other than 0, exposure compensation is shown in the monitor.



Continuous

Use the options in this menu to capture a fleeting expression on a portrait subject, photograph a subject that is moving unpredictably, or capture motion in a series of pictures.



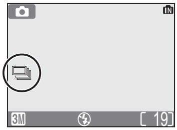
Option	Description
Single	Camera takes one picture each time shutter-release button is pressed.
Continuous	Camera takes pictures continuously while shutter-release button is held down. Pictures are recorded at a rate of about three frames every two seconds. With E4100, camera records seven pictures when image mode is set to 4M Normal (2288). With E3200, camera records five pictures when image mode is set to 3M Normal (2048), and with E2200, six pictures when image mode is set to 2M Normal (1600).
Multi-Shot 16	When shutter-release button is pressed all the way, camera takes sixteen consecutive images at a rate of about three frames every two seconds. With E3200, up to five series of images can be taken, and with E4100/E2200, one series can be taken. The sixteen images are arranged in four rows of four images and saved as a single picture. Image mode is fixed at 4M Normal (2288) with E4100, at 3M Normal (2048) with E3200 and at 2M Normal (1600) with E2200.

Restrictions on Camera Settings

At settings other than **Single**, the flash (☞ 24) turns off automatically and focus (☞ 20), exposure (☞ 67), and auto white balance (☞ 65) for all photos are determined by the first picture in each series. When **Multi-Shot 16** is selected, digital zoom (☞ 18) can not be used. **Multi-Shot 16** can not be selected when digital zoom is in effect. BSS (☞ 69) is available only at a setting of **Single**.

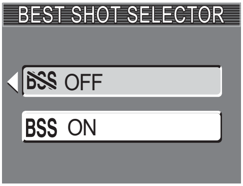
Continuous

At settings other than **Single**, the current "continuous" setting is indicated by an icon in the monitor.



Best Shot Selector

When the "Best Shot Selector" (BSS) is on, the camera takes pictures as long as the shutter-release button is held down, to a maximum of ten. These images are then compared and the sharpest picture (the picture with highest level of detail) saved to the memory or memory card. BSS is recommended for situations in which inadvertent camera movement can produce blurred pictures, for example when:



- the camera is zoomed in
- lighting is poor and the flash can not be used

Option	Description
BSS **off**	BSS off; camera functions normally.
BSS **on**	BSS on. Flash turns off automatically and focus, exposure, and auto white balance for all photos are determined by the first picture in each series.

Notes on BSS

BSS may not produce the desired results with a moving subject or if you change the composition while the shutter-release button is pressed all the way down.

"Continuous" and BSS

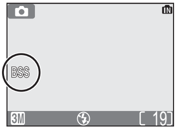
CONTINUOUS is automatically set to **Single** when BSS is on. Choosing another option for CONTINUOUS cancels BSS.

The Self-Timer

BSS will not take effect when the self-timer is on, even if **On** is selected in the BEST SHOT SELECTOR menu.

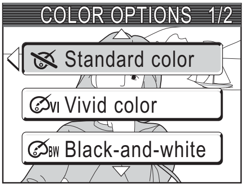
BSS

When BSS is on, a **BSS** icon appears in the monitor.



Color Options

MENU ▸ Color options



Use the options in this menu to add special effects to your pictures. There are five special effects to choose from.

- The effect you choose is reflected in the picture displayed in the monitor.

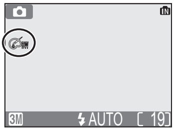
Option	Description
Standard color	Picture appears with natural colors.
VI **Vivid color**	Picture appears in sharp colors.
BW **Black-and-white**	Picture appears in black and white.
SE **Sepia**	Picture appears in sepia tones.
C **Cyanotype**	Picture appears with blue cast.

White Balance

When Black-and-white, Sepia or Cyanotype is selected, the White balance option is not available in the shooting menu.

Color Options Indicator

When an option other than **Standard color** is chosen, the selected mode indicator is displayed in the monitor.



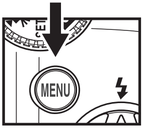
Using the Playback Menu

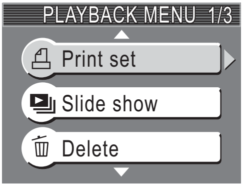
The playback menu contains the following options:

Option	Description	🔍
Print set	Select pictures for printing on a DPOF-compatible device; specify number of copies and information to be included on prints.	48-51
Slide show	View pictures in the memory or on the memory card in an automatic slide show.	72
Delete	Delete all or selected pictures.	73-74
Protect	Protect selected pictures from accidental deletion.	75
Auto transfer	Mark all or selected pictures for transfer to a computer; turn auto transfer marking on or off.	76-77
Small pic.	Create small copies of pictures.	78
Copy	Transfer pictures from internal memory to memory card or vice versa. (This option is displayed only when the memory card is inserted.)	79-81

To display the playback menu:

1





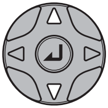
Display playback menu.

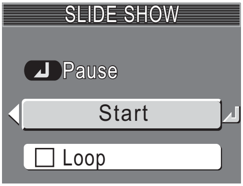
Slide Show

▶ ▶ MENU ▶ Slide show

This option is used to play pictures back in an automated "slide show" with about three seconds between each picture.

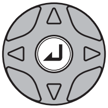
1

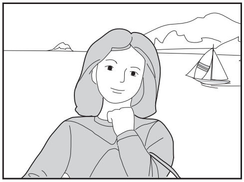




Highlight **Start**.

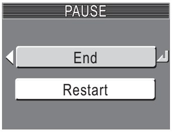
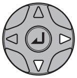
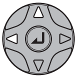
2





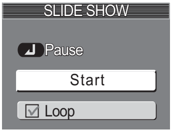
Begin slide show.

The following operations can be performed during the show:

To	Press	Description
Pause slide show		Menu shown right will be displayed. Highlight **Restart** and press the center of the multi selector to resume show. Highlight **End** and press the center of the multi selector to end show. 
Skip to next frame		Press multi selector to right or down to skip to next slide. Hold multi selector down to fast forward through show.
Return to previous frame		Press multi selector to left or up to return to previous slide. Hold multi selector down to rewind through show.
End slide show	MENU	End slide show and return to playback.

"Loop"

If **Loop** is selected in the starting screen, the slide show will repeat automatically. To select or deselect the loop option, highlight **Loop** and press the center of the multi selector. A check mark next to **Loop** indicates that the loop option is selected.



Auto Off

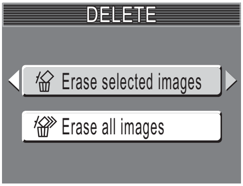
The camera will enter standby mode if no operations are performed for thirty minutes during a slide show.

Small Pictures and Movies

Copies created with the small picture option (78) are not displayed during slide shows. Movies are displayed as still images showing the movie's first frame.

Delete

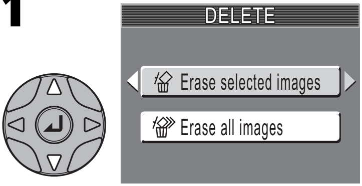
▶ MENU ▶ Delete



The delete menu contains the following options:
If no memory card is inserted in the camera, pictures in the internal memory will be deleted.
If the camera contains a memory card, pictures on the card will be deleted.
To delete pictures in the internal memory, remove the memory card.

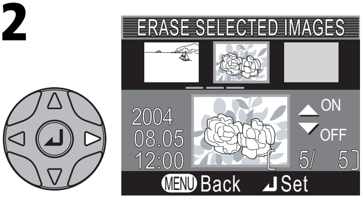
Deleting Selected Pictures

1



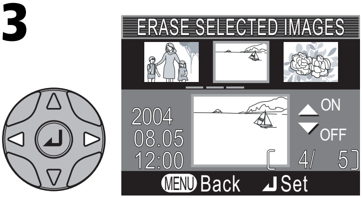
Highlight **Erase selected images**.

2



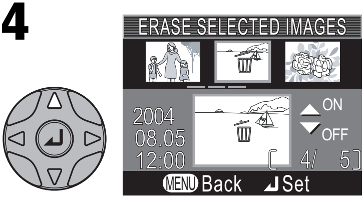
Pictures in memory or memory card displayed as thumbnail images.

3



Highlight picture.

4

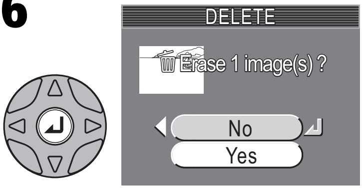


Select highlighted picture. Selected pictures marked by 🗑 icon.

5

Repeat steps 3 and 4 to select additional pictures. To deselect picture, highlight and press multi selector down. To exit without deleting pictures, press MENU button.

6

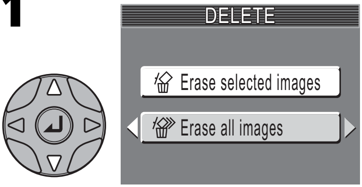


Confirmation dialog displayed. Select **Yes** to delete pictures, **No** to exit without deleting pictures.

Deleting All Pictures

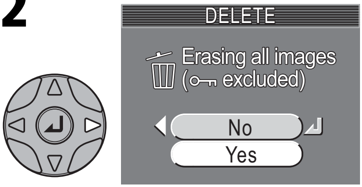
To delete all unprotected pictures in the memory or on the memory card:

1



Highlight **Erase all images**.

2



Confirmation dialog displayed. Select **Yes** to delete pictures, **No** to exit without deleting pictures.

Before Deletion

Once deleted, pictures can not be recovered. Be sure that any pictures you would like to keep have been transferred to a computer (45-47).

Protected Pictures

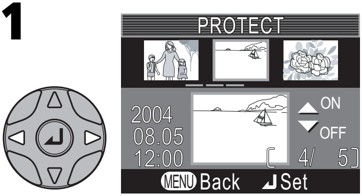
Pictures marked with a icon are protected and can not be deleted (75).

Protect

MENU ▶ Protect

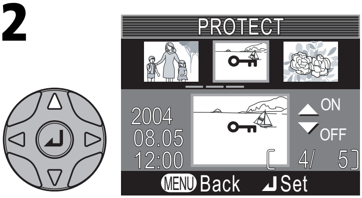
This option is used to protect pictures from accidental deletion. Protected files can not be deleted by pressing the 🗑 button or using the options in the **Delete** menu. Note, however, that protected pictures will be deleted when the memory or memory card is formatted.

1



Highlight picture.

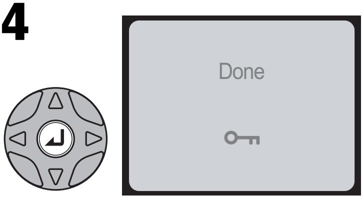
2



Select highlighted picture. Selected pictures marked by O‑ icon.

3 Repeat steps 1 and 2 to select additional pictures. To deselect picture, highlight and press multi selector down. To exit without changing protected status of pictures, press MENU button.

4



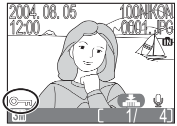
Complete operation and return to playback menu.

Notes on Protecting Pictures

Protected pictures cannot be deleted using the Delete button or menu. However, all pictures, including protected files, will be deleted when the memory or memory card is formatted.

The Protect Icon

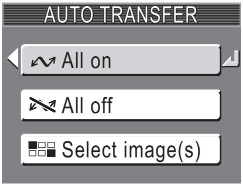
During playback, a protect icon appears on all protected pictures.



Auto Transfer

MENU ▸ Auto transfer

This option is used to mark pictures for transfer to a computer and to turn automatic transfer marking on and off.



Option	Description
All on (default option)	All pictures in memory or on memory card are marked for transfer. Pictures taken while this option is in effect will be marked for transfer.
All off	Remove transfer marking from all pictures in memory or on memory card. Pictures taken while this option is in effect will not be marked for transfer.
Select image(s)	Mark selected pictures for transfer.

Transferring More than 999 Pictures

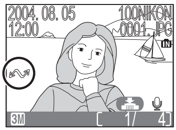
No more than 999 pictures can be marked for transfer. If more than 999 pictures are marked, use PictureProject to transfer the pictures. See the PictureProject Reference Manual (on CD) for details.

Hidden Pictures

Some Nikon digital cameras allow you to hide pictures during playback. Hidden pictures can be viewed on the E4100/E3200/E2200 but can not be selected for transfer.

The Icon

Pictures that have been selected for transfer are identified by a icon.



Full-screen playback

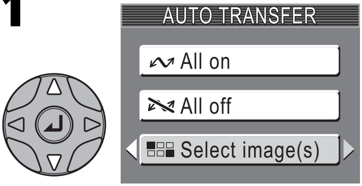


Thumbnail playback

When you connect the camera to a computer via the UC-E6 USB cable and press the center of the multi selector to transfer pictures, only pictures marked with a icon will be transferred (45).

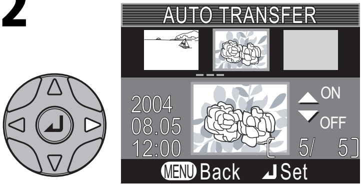
Marking Selected Pictures for Transfer

1



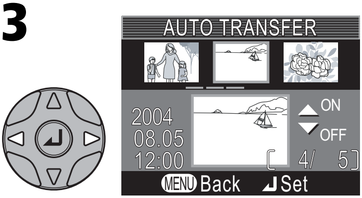
Highlight **Select image(s)**.

2



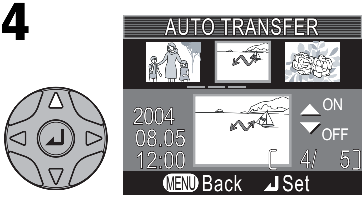
Pictures in memory or on memory card displayed as thumbnail images.

3



Highlight picture.

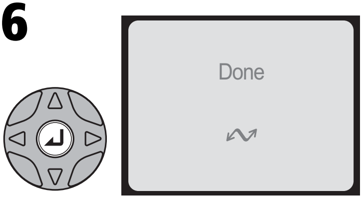
4



Select highlighted picture. Selected pictures marked by icon.

5 Repeat steps 3 and 4 to select additional pictures. To deselect picture, highlight and press multi selector down. To exit without changing transfer status of pictures, press MENU button.

6



Complete operation.

Marking Pictures for Transfer with Other Cameras

Pictures selected for transfer with another model of Nikon camera can not be transferred when the memory card is inserted in the E4100/E3200/E2200. Use the E4100/E3200/E2200 to reselect the pictures.

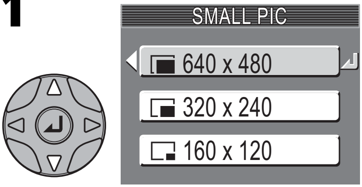
Small Picture

▶ ▸ MENU ▸ Small pic.

To create a small copy of a picture, select **Small pic.** after displaying the image in full-screen playback or selecting it in the thumbnail display.

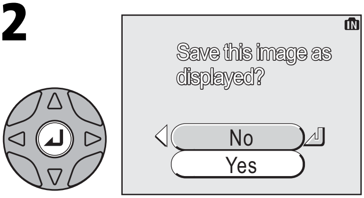
Option	Size (pixels)	Description
640 × 480	640 × 480	Copy can be displayed full-screen on television or 13″ monitor with no drop in quality.
320 × 240	320 × 240	Suited to display on web pages. Small file size reduces time needed to display picture in web browser.
160 × 120	160 × 120	Copy can be sent and received quickly as email attachment. Where application supports display of JPEG images, picture can be viewed in message window.

1



Highlight option.

2



Confirmation dialog displayed. Select **Yes** to create resized copy, **No** to exit without creating copy.

To view the new, resized copy, press the multi selector down until the copy is displayed. The copy will be displayed after the last picture recorded (in thumbnail playback, small pictures are indicated by a gray border). To reduce file size, copies are stored in the memory or on the memory card as BASIC-quality JPEG files (compression ratio 1 : 16). Copies are stored in separate files with names of the form "SSC*Nnnnn*.JPG," where "nnnn" is a four-digit number assigned automatically by the camera.

Copies can not be viewed or cropped using playback zoom.

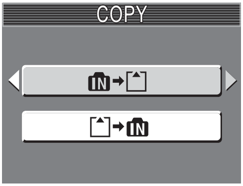
Small Picture

Small pictures can not be created from resized copies or cropped copies.

Copy

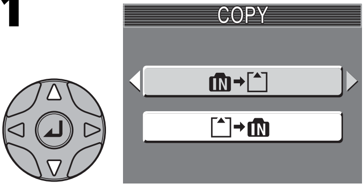
▶ ▸ MENU ▸ Copy

This option is used to transfer pictures from the camera's internal memory to the memory card, or vice versa.
IN indicates the camera's internal memory and [▲] the memory card.
This option is displayed only when the memory card is inserted.



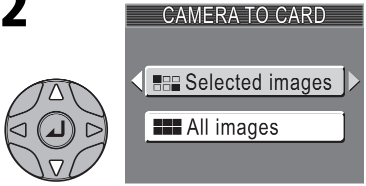
Copying Selected Pictures

1



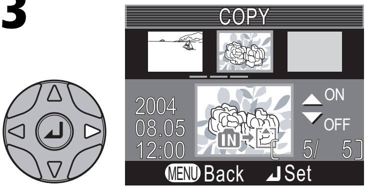
Highlight IN→[▲] **(memory → memory card)** or [▲]→IN **(memory card → memory)**, press multi selector to right.

2



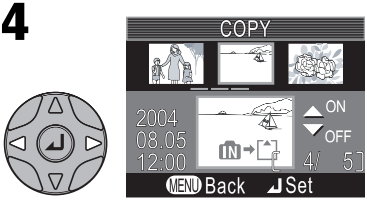
Highlight **Selected images**.

3



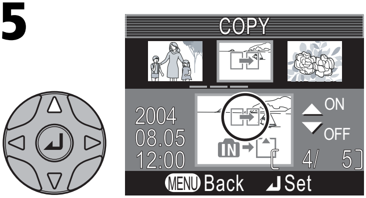
Pictures in memory or on memory card are displayed. (Based on when IN→[▲] is selected in step 1)

4



Highlight picture.

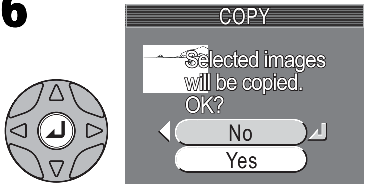
5



Select highlighted picture.

Selected pictures marked by [→] icon. Repeat steps 4 and 5 to select additional pictures. To deselect picture, highlight and press multi selector down.

6

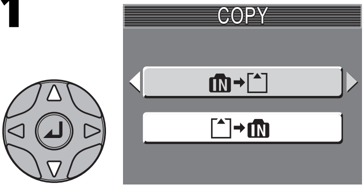


Confirmation dialog displayed. Select **Yes** to copy pictures, **No** to exit without copying pictures.

Copying All Pictures

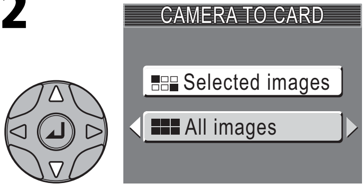
To copy all pictures in the memory or on the memory card:

1



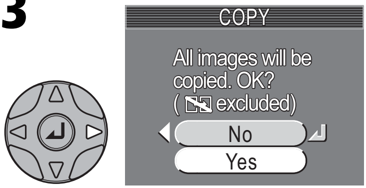
Highlight IN→[card] **(memory → memory card)** or [card]→IN **(memory card → memory)**, press multi selector to right.

2



Highlight **All images**.

3



Confirmation dialog displayed. Select **Yes** to copy pictures, **No** to exit without copying pictures.

Copy

- If there is not enough space in the memory or on the memory card to receive the copy, IMAGE CANNOT BE SAVED will be displayed (101). Delete unwanted pictures or insert a new memory card (if using a memory card) before trying again.
- Movies over 10 MB cannot be copied to the E3200 and movies over 5 MB cannot be copied to the E2200. With E4100, movies up to the size of the internal memory can be handled.
- Copying of pictures taken with another make of camera or retouched on a computer is not guaranteed by Nikon.

File Number

- When pictures are copied using the **All images** option, all the pictures in the folder are copied with the same file numbers. The newly copied folder is assigned the lowest available number.
- When pictures are copied using the **Selected images** option, the newly copied pictures are numbered consecutively from the largest number existing between the two memory sources.

Ex: when the last number in the source memory is 32 (DSCN0032.JPG) and the last number in the destination memory is 15 (DSCN0015.JPG)

The copied pictures are assigned numbers starting from DSCN0033.

After that, numbering will continue from the lowest number after the number of the last file that was copied.

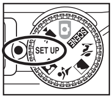
Print Set

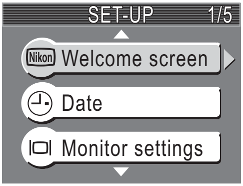
If a print order has been created, the print order data will not be copied with the picture.

Using the Setup Menu

The setup menu contains the following options:

Option	Description	👁
Welcome screen	Choose the welcome screen displayed when the camera is turned on.	83
Date	Set the camera clock.	84-85
Monitor settings	Hide or display the monitor indicators.	86
Date imprint	Imprint pictures with the date and/or time of recording.	87-88
Brightness	Adjust monitor brightness.	89
Sound settings	Adjust volume of button, shutter and start-up sounds.	90
Blur warning	Choose whether or not to perform a camera shake check.	91
Auto off	Choose how long the monitor will remain on before turning off automatically to save power.	92
Format memory/ card	Format internal memory or memory cards for use in the camera.	93
Language	Choose a language for camera menus and messages.	94
USB	Choose **PTP** or **Mass Storage** according to your computer's operating system.	45
Video mode	Select the video mode from NTSC and PAL.	94
Reset all	Restore camera settings to default values.	94
Battery type	Choose the type of batteries inserted in the camera.	96
Firmware version	Display the current firmware version.	96



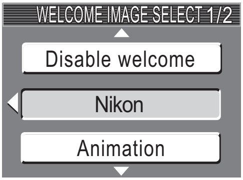


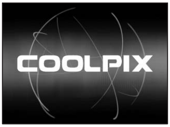
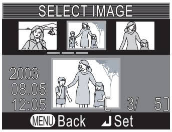
To clear the setup menu from the monitor, rotate the mode dial to another setting or press the ▶ button.

Welcome Screen

SET UP ▶ Welcome screen

This option is used to choose the welcome screen displayed when the camera is turned on.



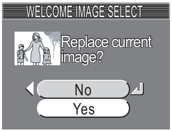
Option	Description
Disable welcome	No welcome screen is displayed when camera is turned on.
Nikon	Image shown at right is displayed when camera is turned on. 
Animation (default option)	Short animation is displayed when camera is turned on. 
Select an image	You can choose the welcome screen from pictures currently stored in the memory or on the memory card. 1 The SELECT IMAGE screen is displayed. Highlight a picture using the multi selector. 2 Press center of multi selector. To select a picture stored in the camera memory, remove the memory card. 

Small Pictures and Cropped Copies

Resized copies created with the small picture and cropping options can only be selected for the welcome screen if they are (▇) 640 × 480 pixels or larger.

"Select an Image"

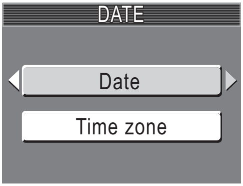
When **Select an image** is selected, the chosen picture will appear at startup even when the memory card containing the image is removed from the camera. If you select **Select an image** after choosing a custom welcome screen, the confirmation dialog shown at right will be displayed. Select **Yes** to choose a new picture for the welcome screen, **No** to exit leaving the welcome screen unchanged.

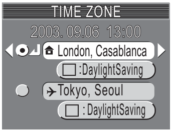
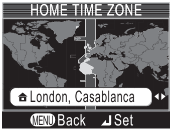


Date

SET UP ▶ Date

This option is used to set the camera clock.
This option is available after you have set the camera clock when using your camera for the first time. For more information on setting the camera clock, see "First Steps: Basic Setup" (14).

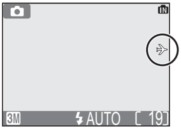


Option	Description
Date	Set the date and time (14).
Time zone	Select the time zone. The normal time zone setting is 🏠 (home time zone). If you select ✈ (travel destination time zone), the time difference is automatically calculated and the date and time in the selected region are displayed.  1 Press multi selector up or down to highlight 🏠 or ✈, then press center of multi selector. Press multi selector down to highlight **DaylightSaving** and press center of multi selector. The ✔ icon is displayed. Selecting daylight saving time automatically advances the time one hour. To cancel daylight saving time, press center of multi selector again.  2 Press multi selector right to display the time zone screen. 3 Press multi selector left or right to highlight a time zone (region), then press center of multi selector.

The Camera Clock

The camera clock is less accurate than most watches or household clocks. Check the clock regularly against more accurate timepieces and reset as necessary.

✈ *(Travel Destination Time Zone)*



To set the clock to the travel destination time zone, highlight ✈ and press the center of the multi selector. While the travel destination time zone is selected, a ✈ icon will be displayed in the monitor when the camera is in shooting mode. To choose a new travel destination, highlight ✈ and press the multi selector to the right, then choose a location as described on the previous page.

DaylightSaving *(Daylight Saving Time)*

To turn daylight saving time on or off, highlight **DaylightSaving** and press the center of the multi selector. Selecting daylight saving time automatically advances the time one hour.

The camera supports the following time zones:

GMT +/–	Location
GMT –14	Sydney, Guam
GMT –13	NewCaledonia
GMT –12	Auckland, Fiji
GMT –11	Midway, Samoa
GMT –10	Hawaii, Tahiti
GMT –9	Alaska, Anchorage
GMT –8	PST (PDT): Los Angeles, Seattle, Vancouver
GMT –7	MST (MDT): Denver, Phoenix, La Paz
GMT –6	CST (CDT): Chicago, Houston, MexicoCity
GMT –5	EST (EDT): New York Toronto, Lima
GMT –4	Caracas, Manaus

GMT +/–	Location
GMT –3	BuenosAires, SanPaulo
GMT –2	Fernando de Noronha
GMT –1	Azores
GMT	London, Casablanca
GMT +1	Madrid, Paris, Berlin
GMT +2	Athens, Helsinki
GMT +3	Moscow, Nairobi
GMT +4	AbuDhabi, Dubai
GMT +5	Islamabad, Karachi
GMT +6	Colombo, Dacca
GMT +7	Bangkok, Jakarta
GMT +8	Beijing, HK, Singapore
GMT +9	Tokyo, Seoul
GMT +10	Sydney, Guam
GMT +11	NewCaledonia
GMT +12	Auckland, Fiji

Time Zones

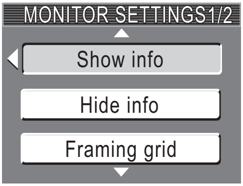
The time zone can not be selected if the date and time have not been set.

Time zone increments of less than one hour are not supported. When travelling to or from destinations at half- or quarter-hour increments from Greenwich Mean Time (GMT), such as Afghanistan, Central Australia, India, Iran, Nepal, or Newfoundland, set the camera clock to local time (☞ 14).

Monitor Settings

SET UP ▶ Monitor settings

Select this option to hide or display the monitor indicators.

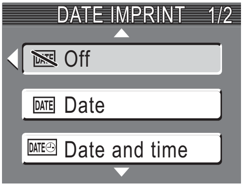


Option	Description
Show info	Display current settings in monitor when taking or viewing pictures.
Hide info	Current settings are hidden.
Framing grid	Display framing grid. Current settings are hidden. (mode only)
Monitor off	Turn the monitor off. (mode only)

Date Imprint

SET UP ▶ Date imprint

The date imprint option is used to imprint the date or the date and time of recording on pictures as they are recorded to the memory or memory card. It can not be used to imprint a date stamp on pictures after recording.



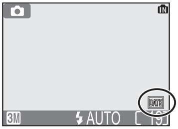
Option	Description
Off	Time and date do not appear on pictures.
Date	Date is imprinted at bottom right corner of all pictures taken while this option is in effect.
Date and time	Date and time are imprinted at bottom right corner of all pictures taken while this option is in effect.
Date counter	Number of days from stored date until date of recording is imprinted at bottom right corner of all pictures taken while this option is in effect.

Image Mode

Data imprinted at an **Image mode** setting of **TV screen (640)** may be difficult to read. Choose a setting of **PC screen (1024)** or larger when using the date imprint option.

Date Imprint

Imprinted data forms a permanent part of the image and will appear whenever the image is printed, regardless of whether the date option is chosen in the **Print set** menu. At settings other than **Off**, a **Date** icon is displayed in the monitor during shooting. Check before shooting to make sure that the camera clock is set to the correct time and date.



The date is recorded in the order selected in the DATE menu. You will not be able to select **Date** or **Date and time** if the camera clock has not been set.

When shooting with the following, Date Imprint is automatically canceled.

E3200: Panorama assist and Movie

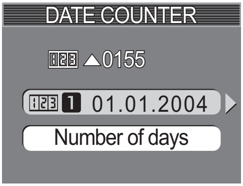
E4100/E2200: BSS, "Continuous" in the Continuous menu, Sports and Sports spectator in the Scene mode, Panorama assist and Movie.

With E4100, the continuous shooting function does not work when the date imprint option is set.

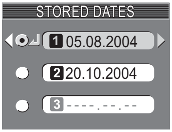
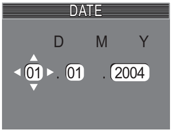
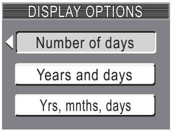
Print Set

The **Print set** option can be used to print the date and time of recording on images taken with **Off** selected in the DATE IMPRINT menu.

Date counter

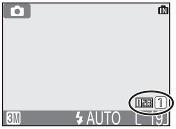


This option is used to store the date and imprint the number of days from that date until the date of recording on pictures. To imprint the number of days that have elapsed, set the day count option by selecting **Date counter** in the DATE IMPRINT menu.
If the stored date is earlier than the date of recording, the number of days that have elapsed is imprinted on pictures.
If the stored date is later than the date of recording, ▲ followed by the number of days until the date of storage is imprinted on pictures.

Option	Description
Stored dates	Up to 3 dates can be stored. Press multi selector up or down to highlight option in STORED DATES menu, then press multi selector to right. Enter date. Follow steps described in Basic Setup (14). Dates between 1 January 1910 and 31 December 2037 can be stored.  
Display options	Press multi selector up or down to highlight **Display options**, then press center of multi selector. 

Date counter

When a date that has been stored in the date counter is selected and the date imprint option is set to **Date counter**, the date counter indicator and stored date number are displayed in the monitor.



Brightness

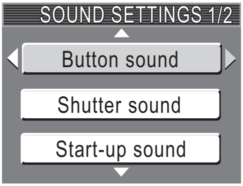
Press the multi selector up or down to increase or decrease the brightness of the monitor by moving the indicator on the left of the display up or down. Press the center of the multi selector to make a selection. To return to the setup menu, press the multi selector to the left.

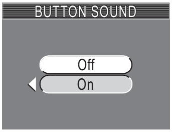
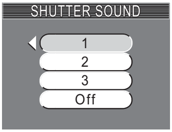
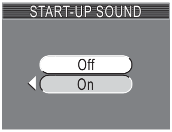
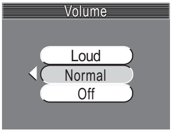


Sound Settings

SET UP ▶ Sound settings

The options in this menu control the sound settings listed below.
With E2200, sound settings can only be set **On** or **Off**. Choosing **Off** mutes button, shutter and start-up sounds. Tone and volume cannot be adjusted.



Option	Description
Button sound (E4100/E3200 only)	Control the sound played when buttons are pressed. A different sound is played when an error occurs or when you turn the camera, select a new mode, switch between shooting and play-back mode or make a selection from menus. 
Shutter sound (E4100/E3200 only)	There are three shutter sounds to choose from. Press multi selector up or down to highlight option, press center of multi selector to select. 
Start-up sound (E4100/E3200 only)	Adjust volume of sound played when camera is turned on. 
Volume (E4100/E3200 only)	Adjust volume of voice memos, movies, and shutter and start-up sounds. Choose volume for built-in speaker from **Loud** and **Normal**. Choosing **Off** mutes, shutter and start-up sounds, and plays voice memos and movies at lowest volume. 

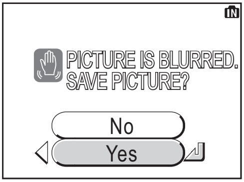
Blur Warning

SET UP ▶ Blur warning

This option is used to display or hide the camera shake warning after you have taken a picture.



Selecting **On** displays the warning only if inadvertent camera movement has caused the picture you have just taken to be blurred.
Select **Yes** to keep the picture or **No** to delete it.



Shooting modes where the Blur Warning does not function

In the shooting modes shown below, Blur Warning is not available even if Blur Warning is set to "On": Continuous (68), Multi-Shot 16 (68), and **BSS** BSS (69) modes, as well as Sports Assist (32), Museum (36), Fireworks show (37), and Panorama assist (38) of scene mode.

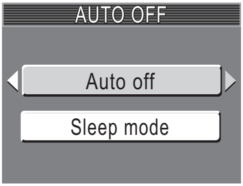
Blur Check

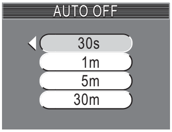
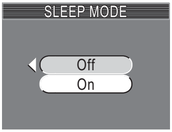
If you want to check how blurred the picture is before deciding whether to delete it or not, select **Yes** to save the picture and then press ▶.

Auto Off

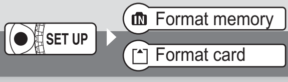
SET UP ▶ 30s Auto off

To save battery power, the camera will enter standby mode if no operations are performed for a preset length of time.



Option	Description
Auto Off	Choose how long monitor will remain on before turning off automatically. Choose from thirty seconds (**30s**), one minute (**1m**) default setting, five minutes (**5m**) and thirty minutes (**30m**). Regardless of option chosen in AUTO OFF menu, monitor will remain on for three minutes when menus are displayed. When powered by AC adapter, camera will enter standby mode if no operations are performed for thirty minutes. 
Sleep mode	If **On** is selected, camera will enter standby mode when there is no change in brightness of subject, even before time selected in AUTO OFF menu has elapsed. The camera will enter sleep mode after thirty seconds of non-operation when **Auto off** is set to thirty seconds (**30s**) or one minute (**1m**), and after one minute when **Auto off** is set to five minutes (**5m**) or thirty minutes (**30m**). 

Format memory/card

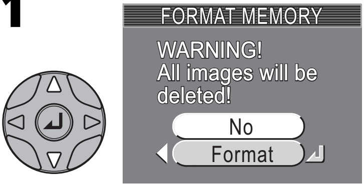


This option is used when you need to format the camera's internal memory or a memory card.
If no memory card is inserted in the camera, the internal memory will be formatted, and if the camera contains a memory card, the card will be formatted.
To format the internal memory, remove the memory card.



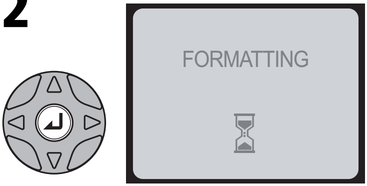
To format the memory:

1



Highlight **Format** (to exit without formatting memory, highlight **No** and press the center of the multi selector).

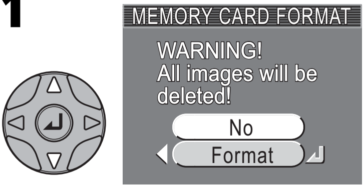
2



Begin formatting. While formatting is in progress, message shown above will be displayed.

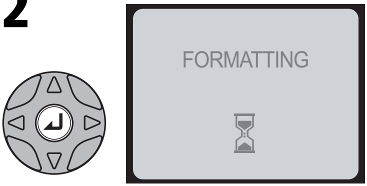
To format a memory card:

1



Highlight **Format** (to exit without formatting card, highlight **No** and press the center of the multi selector).

2

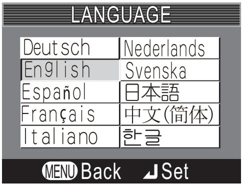


Begin formatting. While formatting is in progress, message shown above will be displayed.

Language

SET UP ▶ Language

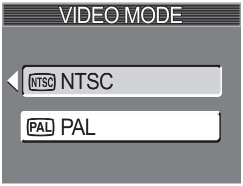
Choose the language for camera menus and messages from **Deutsch** (German), **English**, **Español** (Spanish), **Français** (French), **Italiano** (Italian), **Nederlands** (Dutch), **Svenska** (Swedish), **日本語** (Japanese), **中文(简体)** (Simplified Chinese), or **한글** (Korean).



Video Mode

SET UP ▶ Video mode

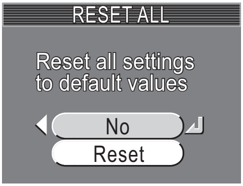
Before connecting your camera to a video device such as a television or VCR (44), choose a video mode setting that matches the video standard used in the device. Your Nikon digital camera supports NTSC and PAL standards.



Reset All

SET UP ▶ Reset all

Select this option to restore the settings listed opposite to their original state.



Option	Description
No	Exit menu, leaving settings unchanged.
Reset	Restore settings to default values.

The following settings are affected:

Setting	Default
Portrait assist	Portrait
Landscape assist	Landscape
Sports assist	Sports
Night portrait assist	Night Portrait
SCENE Scene	Party/Indoor
Movie	Small size (320)
Speedlight	Auto
Self-timer	Off
Macro close-up	Off
Image mode	E4100: Normal (2288), E3200: Normal (2048), E2200: Normal (1600)
White balance	Auto
Exp. +/-	±0
Continuous	Single
Best Shot Selector	Off
Color options	Standard color
Auto transfer	All on
Welcome screen	Animation
Monitor Settings	Show info
Date imprint	Off
Brightness	3
Button sound	On
Start-up sound	On
Shutter sound	1
Volume (E4100/E3200 only)	Normal
Auto Off	1m
Sleep mode	Off
Blur warning	On

Choosing **Reset** also clears the current file number (23) from memory. Numbering will continue from the lowest number available in the memory or on the memory card. All other settings are unaffected.

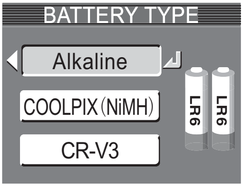
Resetting File Numbering to 0001

To reset file numbering (23) to 0001, select **Reset All** after either deleting all pictures (74) or formatting the memory card (93).

Battery Type

SET UP ▶ Battery type

This option is used to choose the type of batteries inserted in the camera.



Option	Description
Alkaline	Select this option when you have inserted alkaline (AA) batteries.
COOLPIX (NiMH)	Select this option when you have inserted rechargeable EN-MH1 (AA) nickel-metal hydride batteries, nickel-manganese batteries, or lithium (AA) batteries.
CR-V3	Select this option when you have inserted a CR-V3 lithium battery.

Backup Battery

If the backup battery (14) is not charged sufficiently, the battery type setting may revert to the default setting (E4100: the type of the included batteries, E3200/E2200: alkaline batteries).

Firmware Version

SET UP ▶ Ver. Firmware version

Select this option to display the current firmware version.



Optional Accessories

At the time of writing, the following optional accessories were available for your Nikon digital camera. Contact your local retailer or Nikon representative for details.

Rechargeable battery	Additional EN-MH1 NiMH batteries are available from your retailer or local Nikon representative.
Battery charger	MH-71, MH-70 battery charger for EN-MH1 batteries
AC adapter	EH-62B AC adapter
Carrying case	CS-CP18 soft case*1
Water-proof Case	WP-CP1*2

*1 Not available in U.S.

*2 Not available in some areas.

Approved Memory Cards

The following memory cards have been tested and approved for use with your Nikon digital camera:

San Disk	16 MB, 32 MB, 64 MB, 128 MB, 256 MB
Toshiba	16 MB, 32 MB, 64 MB, 128 MB, 256 MB
Panasonic	16 MB, 32 MB, 64 MB, 128 MB, 256 MB*, 512 MB*

* High speed type of 10 MB/s or over

Caring for Your Camera

Cleaning

Lens

One key to cleaning the lens is to not touch it with your fingers. Remove dust or lint with a blower (typically a small device with a rubber bulb attached to one end that you pump to produce a stream of air out the other). To remove fingerprints or other stains that can not be removed with a blower, wipe the lens with a soft cloth, using a spiral motion that starts in the center of the lens and works out to the edges.

Monitor

Remove dust or lint with a blower. To remove fingerprints and other stains, clean the monitor with a soft, dry cloth, being careful not to apply pressure.

Avoid contact with liquid crystal

Should the monitor break, care should be taken to avoid injury due to broken glass and to prevent the liquid crystal from the monitor touching the skin or entering the eyes or mouth.

Body

Use a blower to remove dust and lint, then wipe gently with a soft, dry cloth. After using the camera at the beach or seaside, wipe off any sand or salt with a cloth lightly dampened with fresh water, then dry thoroughly.

Do not use alcohol, thinner, or other volatile chemicals.

Notes on the Monitor

- The monitor may contain a few pixels that are always lit or that do not light. This is a characteristic common to all TFT LCD monitors, and does not indicate a malfunction. Images recorded using the product will not be affected.
- When you frame bright subjects, vertical comet-like streaks that whiten toward either end may appear in the monitor. This phenomenon, known as "smear," does not appear in the final photograph and does not indicate a malfunction. Some smear may appear in movies.
- Images in the monitor may be difficult to see in a bright light.
- The monitor is lit by an LED backlit. Should the monitor begin to dim or flicker, contact your Nikon service representative.

Storage

Turn the camera off when not in use and check that the power-on lamp is off before putting the camera away. To prevent mold or mildew, store the camera in a dry, well-ventilated area. If you will not be using the product for long periods, remove the batteries to prevent leakage and store the camera in a plastic bag containing a desiccant. Do not store the camera case (available separately) in a plastic bag, as this may cause the material to deteriorate. Note that desiccant gradually loses its capacity to absorb moisture and should be replaced at regular intervals. Do not store your camera with naptha or camphor moth balls or in locations that:

- are poorly ventilated or damp
- are next to equipment that produces strong electromagnetic fields, such as televisions or radios
- are exposed to temperatures below -10 °C (14 °F) or above 50 °C (122 °F; for example near a space heater or in a closed vehicle on a sunny day)
- are subject to humidities of over 60%

To prevent mold or mildew, take the camera out of storage at least once a month. Turn the camera on and release the shutter a few times before putting the camera away again.

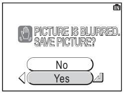
Store the batteries in a cool, dry place.

Batteries

- When turning the camera on, check that the batteries are charged. The monitor will display a warning when batteries are low.
- Carry a fresh CR-V3 battery as a replacement when taking pictures on important occasions.You may find it difficult to purchase replacement batteries on short notice.
- On cold days, the capacity of batteries tends to decrease. Be sure that the batteries are fully charged before heading outside to take pictures in cold weather. Keep spare batteries in a warm place and exchange as necessary. Once warmed, a cold battery may recover some of its charge.
- If the battery terminals are dirty, wipe them off with a clean, dry cloth before use.
- Repeatedly recharging NiMH batteries before they are fully exhausted may result in a "memory" effect, causing the batteries to lose their charge quickly. The batteries will return to normal after being fully discharged and recharged.
- NiMH batteries gradually lose their charge when left unused. We recommend that you charge NiMH batteries immediately before use.
- Used batteries are a valuable resource. Please recycle used batteries in accordance with local regulations.

Error Messages

The following table lists the error messages and other warnings that appear in the monitor and how to deal with them.

Display	Problem	Solution	
(clock icon) (Flashes)	Clock not set.	Set clock to current date and time.	14
WARNING ! ! BATTERY EXHAUSTED	Batteries exhausted.	Turn camera off and replace batteries.	12
AF● (●flashes red)	Camera cannot focus.	Use focus lock to focus on another subject at same distance, then recompose picture.	21
(camera shake icon)	Slow shutter speed. Pictures may be blurred.	Use flash, or steady camera using tripod, by placing camera on level surface, or by holding camera in both hands with elbows against torso.	18, 24-25
	Recorded picture may be blurred.	Select **Yes** to keep picture, **No** to delete. Camera shake warning can be hidden.	91
WARNING ! ! PLEASE WAIT FOR THE CAMERA TO FINISH RECORDING (hourglass icon)	Camera turned off or ▶ button pressed during recording. The mode dial was rotated during recording.	Message clears from display automatically when recording is complete.	21
MEMORY CARD IS WRITE PROTECTED	Write-protect switch is in "lock" position.	Slide write-protect to "write" position.	11
(card icon) CARD IS NOT FORMATTED Format No ▷	Memory card has not been formatted for use in camera.	Press multi selector up to highlight **FORMAT** and press to right to format card, or turn camera off and replace card.	93, 10-11

Display	Problem	Solution	
THIS CARD CANNOT BE USED	Error accessing memory card.	Use approved card. Check that connectors are clean.	97 -
WARNING ! ! THIS CARD CAN-NOT BE READ			
OUT OF MEMORY	*Camera in shooting mode*: Insufficient memory to record pictures at current settings.	• Choose lower image quality/ size. • Delete pictures. • Insert new memory card.	63-64 22-23, 73-74 10
	Camera connected to computer: Not enough space on memory card to record information need for transfer.	Disconnect camera, delete unwanted pictures, and try again.	22-23, 73-74
IMAGE CANNOT BE SAVED	• Memory card has not been formatted for use in camera, or error occurred while saving picture. • Camera has run out of file numbers. • Camera can not copy picture using small picture, or crop options. • Memory card has not been formatted for use in camera. • Error occurred while saving movie. • Camera has run out of file numbers. • Takes long time to save movie on memory card.	• Reformat memory card. • Insert new memory card or delete pictures. • Copies can not be created from movies or from other copies. • Reformat memory card. • Insert new memory card or delete pictures or movies. • Insert memory card with faster processing speed.	93 10, 22, 23, 73-74 42, 78 93 10, 73 56, 97
CARD CONTAINS NO IMAGES	No pictures on memory card or in memory.	Press ▶ button to return to shooting mode.	22
ALL IMAGES ARE HIDDEN	No pictures on memory card that can be viewed on E4100/ E3200/E2200.		
FILE CONTAINS NO IMAGE DATA	File created by computer or different make of camera.	View file on computer or correct make of camera.	-

Display	Problem	Solution	🕮
WARNING! MODE DIAL IS NOT IN THE PROPER POSITION	Mode dial is positioned between two modes.	Adjust mode dial to select desired mode.	6
THIS IMAGE CANNOT BE DELETED	Attempt to delete protected picture.	Remove protection before deleting picture.	75
COMMUNICATIONS ERROR	USB cable disconnected or memory card removed while pictures are being transferred to computer.	If error appears in computer monitor, click **OK** to exit PictureProject. Turn camera off, reconnect cable or replace memory card, then turn camera on and transfer pictures.	45-47
	USB option set incorrectly.	Turn camera off and disconnect cable, then choose new USB setting in camera setup menu and reconnect camera. If error persists, use PictureProject [transfer] button to transfer pictures.	45
NO IMAGES ARE MARKED FOR TRANSFER	No pictures selected for transfer when ⊕ (transfer) button pressed to transfer pictures to computer.	Disconnect camera and select at least one picture for transfer, then begin transfer again.	47, 76-77
TRANSFER ERROR	Error occurred when pictures were transferred to computer.	Check that camera is connected and that batteries are fully charged.	12 46
NEW CITY IS IN THE CURRENT TIME ZONE	Travel destination is in same time zone as home location.	No need to specify new time zone if travel destination is in same time zone as home location.	84
LENS ERROR	Error has occurred during lens operation.	Turn camera off and then on again. If error persists, contact retailer or Nikon representative.	-
SYSTEM ERROR	Error has occurred in camera's internal circuitry.	Turn camera off, unplug optional AC adapter (if using), remove and reinsert batteries, and turn camera on. If error persists, contact retailer or Nikon representative.	8-9, 12

Troubleshooting

If your camera fails to function as expected, check the list of common problems below before consulting your retailer or Nikon representative. Refer to the page numbers listed in the right-most column for information on solving the problems listed here.

Electronically-Controlled Cameras

In extremely rare instances, unusual characters may appear in the monitor and the camera may stop functioning. In most cases, this phenomenon is caused by a strong external static charge. Turn the camera off, remove and replace the batteries, and turn the camera on again, or, if you are using an AC adapter (available separately), disconnect and reconnect the adapter, and turn the camera on again. In the event of continued malfunction, contact your retailer or Nikon representative. Note that disconnecting the power source as described above may result in the loss of any data not recorded to the memory or memory card at the time the problem occurred. Data already recorded to the memory or memory card will not be affected.

Problem	Possible cause	🔍
Monitor is blank	• Camera is off. • Batteries are not correctly inserted or battery-chamber cover is not properly latched. • Batteries are exhausted. • EH-62B AC adapter (available separately) is not properly connected. • Camera is in sleep mode. Press shutter-release button halfway. • Monitor is off. • USB cable is connected. • AV/Video cable is connected.	12 8 12 - 13 5 - -
Camera turns off without warning	• Batteries are low. • Batteries are cold.	12 99
No indicators appear in monitor	• Indicators are hidden. Select **Show info** for **Monitor settings** option in setup menu.	86
Monitor is hard to read	• Ambient lighting is too bright: move to a darker location or use viewfinder. • Monitor brightness needs adjustment. • Monitor is dirty: clean monitor.	19 89 98

Problem	Possible cause	🕮
No picture is taken when shutter-release button is pressed	• Camera is in playback mode. • Batteries are exhausted. • Red (⚡) lamp flickers: flash is charging. • Green (AF) lamp flickers: camera unable to focus. • Message "CARD IS NOT FORMATTED" appears in monitor: memory card is not formatted for use in your camera. • Message "OUT OF MEMORY" appears in monitor: insufficient memory to record picture at current **Image mode** setting.	22 12 20 20 10-11, 93 63
Pictures are too dark (underexposed)	• Flash is off. • Flash window is blocked. • Subject is outside range of flash. • Exposure compensation is too low.	24 18 25 67
Pictures are too bright (overexposed)	• Exposure compensation is too high.	67
Pictures are out of focus	• Subject was not in focus area when shutter-release button was pressed halfway. • Green (AF) lamp flickers: camera unable to focus.	20 20
Pictures are blurred	• Camera shook during shot. Blurring caused by camera shake can be reduced by: ◆ Using the flash ◆ Using the Best Shot Selector (BSS) ◆ Using the self-timer with a tripod	24 69 26
Randomly-spaced bright pixels ("noise") appear in image	• Shutter speed too slow. Noise can be reduced by: ◆ Using the flash ◆ Selecting (night portrait assist) mode, or selecting SCENE (scene) mode and choosing **Dusk/Dawn** or **Night landscape (E3200)** ◆ Selecting (portrait assist), (landscape assist) mode or selecting SCENE (scene) mode and choosing **Party/Indoor**, **Beach/Snow**, **Sunset**, **Dusk/Dawn**, **Night landscape**, **Close up**, **Fire-works show**, **Copy**, **Panorama assist**, or selecting (Auto) mode and choosing S (single, turning BSS off) **(E4100/E2200)**	24 33, 35, 36 30, 31 33 35-39 68, 69
Colors are unnatural	• White balance does not match light source. • Color options is not set to Standard color.	65

Problem	Possible cause	🕮
Flash does not fire	• Flash is off. Note that flash turns off automatically when; ◆ The mode dial is set to (landscape assist), (sports assist), or (movie), or to SCENE (scene) mode with any of **Sunset**, **Night landscape**, **Museum**, **Fireworks show**, or **Dusk/Dawn** selected in scene menu.	24 31, 32, 56, 35-36
Picture can not be played back	• Picture has been overwritten or renamed by computer or other make of camera.	-
Copy can not be created using small picture or crop options	• Picture is a movie. • Picture was created with small picture, or crop option. • There is not enough free space on memory card to store new copy.	60 42, 78 16-17
Can not zoom in on picture	• Picture is a movie. • Picture was created with small picture option. • Picture has been cropped to size less than 320 × 240.	60 78 42
PictureProject does not start when camera is connected or memory card inserted in card reader or card slot	• Camera is off. • EH-62B AC adapter (available separately) is not properly connected, or batteries are exhausted. • UC-E6 USB cable is not correctly connected, or card not properly inserted in card reader or card slot. • **USB** item in setup menu set to **PTP** when camera connected to computer running Windows 2000 Professional, Windows Millennium Edition (Me), or Windows 98 Second Edition (SE). • Camera is not registered in Device Manager (Windows only). See *PictureProject Reference Manual* (on CD) for further information.	12-13 9, 12 10-11, 46 45 -

Technical Notes

Specifications

Type		E4100/E3200/E2200 digital camera
Effective pixels		4.0 million (E4100); 3.2 million (E3200); 2.0 million (E2200)
CCD		E4100 1/2.5” high-density CCD; total pixels: 4.23 million
		E3200 1/2.7” high-density CCD; total pixels: 3.34 million
		E2200 1/3.2” high-density CCD; total pixels: 2.14 million
	Image size (pixels)	2,288 × 1,712 (2288) (E4100 only) 2,048 × 1,536 (2048) (E3200 only) 1,600 × 1,200 (1600) (E4100/E3200/E2200) 1,024 × 768 (1024) 640 × 480 (640)
Lens		3 × Zoom Nikkor
	Focal length	E4100: F=5.8 - 17.4 mm (35-mm [135] camera-format equivalent: 35 - 105 mm)
		E3200: F=5.8 - 17.4 mm (35-mm [135] camera-format equivalent: 38 - 115 mm)
		E2200: F=4.7 - 14.1 mm (35-mm [135] camera-format equivalent: 36 - 108 mm)
	f/-number	f/2.8 - f/4.9 (E4100/E3200); f/2.6 - f/4.7 (E2200)
	Construction	Seven elements in six groups (E4100/E3200) Six elements in five groups (E2200)
Digital zoom		4 × (35-mm [135] camera-format equivalent: 420 mm [E4100]/460 mm [E3200]/430 mm [E2200])
Autofocus (AF)		Contrast-detect through the lens (TTL) AF, with AF-assist illuminator (E4100/E3200 only)
	Focus range	30 cm (1´) - ∞; macro mode 4 cm/1.6” (W) - ∞
	Focus-area selection	Center with five-area selection in frame assist mode
	AF-assist illuminator (E4100/E3200 only)	CLASS 1 LED PRODUCT (IEC60825-1 Edition 1.2^{-2001}) Maximum output: 1500 µW (E4100)/700 µW (E3200)
Viewfinder		Real-image zoom viewfinder with LED indication
	Magnification	0.37 - 0.97 × (E4100), 0.34 - 0.94 × (E3200/E2200)
	Frame coverage	Approximately 82% horizontal and 82% vertical (E3200) Approximately 80% horizontal and 80% vertical (E4100/E2200)
Monitor		1.6”, 80,000-dot, amorphous silicon TFT LCD monitor
	Frame coverage (shooting mode)	Approximately 96% horizontal and 96% vertical
Storage Media		Internal memory (14.5 MB)/SD memory cards
	File system	Compliant with Design Rule for Camera File System (DCF), Exif 2.2, and Digital Print Order Format (DPOF)
	File formats	Compressed: JPEG-baseline-compliant, Movies: QuickTime

Exposure	Metering	256-segment matrix metering linked to AF area (when frame is displayed in frame-assisted scene mode)
	Exposure control	Programmed auto exposure with exposure compensation (-2.0 - +2.0 EV in steps of 1/3 EV)
	Range	W: +1 - +17.8 EV (E4100/E3200); +0.8 - +17.7 EV (E2200) T: +2.6 - +16.2 EV (E4100/E3200); +2.5 - +16.2 EV (E2200)
Shutter		Mechanical and charge-coupled electronic shutter
	Speed	4 - 1/3,000 s
Aperture		Electronically-controlled preset aperture
	Range	Two steps (f/2.8 and f/5.6 [W]) (E4100/E3200) Two steps (f/2.6 and f/5.2 [W]) (E2200)
Sensitivity		Approximately equivalent to ISO 50 (auto gain of two to four times) (up to equivalent of ISO200)
Self-timer		Ten-second duration
Built-in Speedlight	Range (approx.)	W:0.4 - 3.4 m/1′3″ - 11′2″ (E4100/E3200); 0.4 - 3.7 m/1′3″ - 12′1″ (E2200), T:0.4 - 2.0 m/1′3″ - 6′6″
	Flash control	Sensor flash system
Interface		USB
Video output		Can be selected from NTSC and PAL
I/O terminals		• A/V out/digital I/O (E4100/E3200); • Video out/digital I/O (E2200);
Power sources		• Two rechargeable Nikon EN-MH1 NiMH batteries • One CR-V3 lithium battery • Two LR6 (AA) alkaline batteries • Two ZR6 (AA) nickel manganese batteries • Two FR6/L91 (AA) lithium batteries • EH-62B AC adapter
Number of frames taken in succession		E4100: 110 frames (alkaline batteries) 260 frames (EN-MH1)/530 frames (CR-V3) E3200: 140 frames (alkaline batteries) 320 frames (EN-MH1)/550 frames (CR-V3). E2200: 150 frames (alkaline batteries) 350 frames (EN-MH1)/600 frames (CR-V3). Measured at standard temperature (25°C/77°F) with fully-charged batteries under standard Nikon test conditions: zoom adjusted with each shot, flash used in approximately one half of shots, image type set to Normal.
Dimensions (W × H × D)		88 × 65 × 38 mm (3.5″ × 2.6″ × 1.5″)
Approximate weight		140 g (4.9 oz) without battery or memory card
Operating environment	Temperature	0 - 40 °C (32 - 104 °F)
	Humidity	Less than 85% (no condensation)

Index

Nikon

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